FEAR OF HIV AND AIDS:
ITS ASSESSMENT AND ITS ORIGINS

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1991

ACKNOWLEDGMENTS

I would like to thank the numerous individuals who have offered their assistance on this project. In particular, I am indebted to the members of my dissertation committee for their insights and guidance. Finally, I would like to thank my family. Without their encouragement and support this dissertation could not have been completed.

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December, 1991

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In the first phase of this project, measurement instruments capable of tapping different aspects of the fear of human immunodeficiency virus (HIV) and aquired immune deficiency syndrome (AIDS) were constructed. Four data collection efforts (total N=1168) and numerous statistical techniques were employed to test and refine these scales. Factor analysis of the survey data revealed five independent components of HIV/AIDS fear. The five resulting subscales displayed both high internal consistency and test-retest reliability. The associations between each fear component and fourteen AIDS-relevant variables also were explored. A key finding was that most of these factors were associated with only one of the five HIV/AIDS fear dimensions. The conclusion drawn was that the study of HIV/AIDS fear as a unidimensional construct is inadequate.

The second phase of the project examined the origins of self/partner fear and fear of nonsexual transmission. After

the levels of each of these fear types were assessed, subjects read an essay focusing on the symbolic nature of AIDS, instrumental concerns regarding AIDS, or a neutral AIDS issue. The main findings involved two-way interactions between essay type and the fear dimensions. Specifically, relationships between self/partner fear and attitudes towards certain preventive measures were strengthened after subjects read the instrumental essay. On the other hand, the associations between fear of nonsexual transmission and certain public policy attitudes were strengthened after subjects read a symbolic essay. Additional correlational evidence suggested that fear of nonsexual transmission may be part of a conservative ideology. Implications for preventive programs and public policy were discussed.

INTRODUCTION

The AIDS Phenomena

Perhaps we became overconfident of our medical capabilities. Perhaps we had false illusions of invulnerability. Perhaps the consequences of AIDS were just too awful to consider. Whatever the reason, it seems there was a belief in the 1970s that we no longer needed to worry about epidemic diseases, at least not in "developed" countries. We were wrong. In 1981, an epidemic disease known as acquired immune deficiency syndrome (AIDS) was identified. That disease now poses perhaps the single greatest health threat that we have ever encountered.

The potentially devastating consequences of AIDS are difficult to overstate. The World Health Organization (WHO) predicts that approximately five million new cases of AIDS will be diagnosed worldwide in the 1990s. More than half of these will occur regardless of the effectiveness of prevention efforts, since they will develop from individuals who were infected during the 1980s (Chin & Mann, 1990). Current evidence from the Pan American Health Organization (PAHO) indicates that "about two million people in North And South America and the Caribbean already are infected with the human immunodeficiency virus" (HIV) ("Study: AIDS rising in Americas," 1991). In the United States alone, the number of reported AIDS cases is expected to exceed 270,000 and

deaths will exceed 179,000 by the end of 1991 (Volberding, 1989). This predicted death toll represents more than a ten-fold increase from 1988 (Koop & Samuels, 1988).

AIDS is both a heterosexual and a homosexual disease. In Africa, the supposed origin of the disease, the pattern of transmission is primarily heterosexual (Chin & Mann, 1990; Lamptey, 1990). However, in many other parts of the world, including the United States, AIDS and HIV have been associated to a large extent with homosexuality. This stems from the fact that, to date, roughly 90% of reported AIDS cases in the United States have involved homosexuals or intravenous drug users. Thus, an association is perceived between AIDS and groups that are already highly stigmatized. The result is that being a person with AIDS (PWA) in this country usually elicits extreme negative public reaction (Herek & Glunt, 1988), adding substantially to the suffering of the victims. Ironically, the view that AIDS was confined solely to these two groups and the lack of sympathy for those stricken with AIDS have delayed prevention efforts to the point where AIDS is now a serious threat to all sections of the population. While most cases of AIDS in the U.S. are still associated with homosexuality or IV drug use, the number of cases in the heterosexual population is definitely on the rise. In fact, the percentage increase in reported cases is currently larger for heterosexuals than homosexuals (Volberding, 1989). It has now reached the point where casual sexual relationships can produce a true, self-

sustaining epidemic in all segments of the population (Potts & Feldblum, 1990).

Given the severity of the situation, researchers have been examining any and all variables that may be related to preventive behavior. A number of factors have been identified. Three factors that may be particularly important are AIDS knowledge, other psychosocial and background factors, and the fear of AIDS.

A common approach to many past health programs has been the dispersal of relevant information. Not surprisingly, researchers in the United States have called for increases and improvements in AIDS education almost from the first diagnosis of the disease (Anderson, Kann, Holtzman, Arday, Truman, & Kolbe, 1990; Dawson & Thornberry, 1988; Goodwin & Roscoe, 1988; Price, Desmond, & Kukulka, 1985; Royse, Dhooper, & Hatch, 1987). As might be expected, early studies frequently pointed out the dearth of knowledge people had about the disease. It appears, though, that some of the information barrage is beginning to sink in. At present, people are fairly accurate in their beliefs about HIV and AIDS, though misconceptions undoubtedly continue to exist. For example, Dawson and Thornberry report that only 63% of their sample was relatively sure that AIDS would not be transmitted by "kissing on the cheek a person who has AIDS." On the brighter side, people do seem to have absorbed much of the basic information concerning protection from AIDS. Eighty-one percent of these respondents perceived the condom to be at least somewhat effective in

preventing transmission of HIV. Interestingly, the general public appears to lack confidence in its knowledge of AIDS. In the same survey, only 21% of the respondents claimed to "know a lot about AIDS." This uncertainty appears to be particularly high concerning nonsexual transmissibility of HIV (Hastings & Scott, 1987).

Although people are generally becoming more knowledgeable about HIV and AIDS, a key question regarding the "education approach" is whether the increase in knowledge correlates with an increase in the use of preventive measures. The results are mixed. Anderson, et al. (1990) found that high school students who knew more about HIV transmission reported having fewer sexual partners and a higher likelihood of frequent condom use. Alternatively, others have reported that behavior change frequently has not occurred and if it has, it often has not occurred in effective ways (Kegeles, Adler, and Irwin, 1988; Strunin & Hingson, 1987). In fact, Kegeles, et al. found that intended and actual usage rates of condoms actually decreased between 1985 and 1986 among male adolescents in the San Francisco area. This decrease occurred despite increases in knowledge and positivity toward taking preventive action. In sum, even though programs have been quite successful at providing accurate information, the use of preventive measures remains far from optimal, both in the United States (Freudenberg, 1990) and elsewhere (de Vroome, Paalman, Sandfort, Sleutjes, de Vries, and Tielman, 1990). It appears that simply increasing knowledge is probably not

sufficient to cause a great deal of behavior change. Nevertheless, many feel it is still a convenient, and perhaps necessary, first step.

Beyond the public's knowledge about AIDS, associations between behavior and a number of other psychosocial and background factors have been identified. For instance, age seems to be an important variable in the use of preventive measures (Ekstrand & Coates, 1990; McKusick, Coates, Morin, Pollack, & Hoff, 1990). In general, younger people are more prone to performance of high-risk behavior. Others have pointed out the importance of one's social network in avoiding high-risk behavior. Failing to take preventive action (e.g., condom use) is linked to having friends who engage in high-risk behavior (Magura, Shapiro, Siddiqi, & Lipton, 1990) and to having a partner who is not receptive to the idea of sexual protection (McKusick, et al., 1990). Still others have found that the use of certain drugs, such as alcohol and marijuana, is relevant. Those who use these drugs are more likely to perform high-risk behavior (Ginzburg, Fleming, & Miller, 1988; Hingson, Strunin, Berlin, & Heeren, 1990). Finally, the amount of control an individual has over his/her sexual impulses seems to be a key factor. Those with more control are much more likely to practice "safe sex" (Emmons, Joseph, Kessler, Wortman, Montgomery, Ostrow, 1986).

While the identification of psychosocial and background factors is extremely useful for targeting "at-risk" populations, it demonstrates less utility as far as

explaining how to induce changes in behavior. Preventive programs cannot easily alter aspects of one's social environment, for example. Therefore, some researchers have turned to other factors that may be more useful in this regard.

One reasonable strategy is the fear associated with HIV and AIDS. Past research on fear arousal has demonstrated reliable (albeit poorly understood) effects of fear on adoption of preferable health habits (Job, 1988; Leventhal, 1970; Sutton, 1982). Although there are a few notable exceptions, (e.g., Janis & Feshbach, 1953), this research suggests a linear effect, such that higher amounts of fear are associated with increases in preventive behavior. Leventhal (1970), however, contends that high fear is no guarantee of preventive behavior. People simply may respond in ways that reduce their fears (i.e., fear control) rather than in ways that deal with the actual threat (i.e., danger control). What types of responses are elicited by the fear of HIV/AIDS? The study of HIV/AIDS fear is still somewhat new and, like many new areas of research, the initial findings are inconclusive.

Research on HIV/AIDS Fear

To see that AIDS currently invokes a great deal of panic and negative affect, one need only pick up a local newspaper or watch the evening news. The media has been filled with stories of fear and, unfortunately, discrimination against PWAs. For instance, there have been stories of church officials refusing to let PWAs touch

baptismal water (Chandler, 1986). Employees of certain firms have banded together and refused to work or threatened to resign if they were required to work with a PWA (Conrad, 1986). Children with AIDS have even had to suffer through court battles merely to win the right to attend their schools ("AIDS in Queens and Kokomo," 1986). Sadly, it seems the fears associated with AIDS have led to mistreatment of PWAs in nearly all aspects of society from employment discrimination (Nusbaum, 1989; Reskin, 1986), to inadequate health care (Wake, 1989), to the tragedy of "gay bashing" (Conrad, 1986).

Before continuing, it is important to identify two related aspects of HIV/AIDS fear that are not a focus of the current research. These are the fear of individuals who know they have been exposed to HIV and the fears of those who already have been diagnosed as having AIDS or HIV. Much of the discussion of these types of fear has come from the fields of counseling and clinical psychology and psychiatry (Bruhn, 1989; Krieger, 1988; Valdiserri, 1986). The goal has been the development of programs to help people deal with these fears effectively and realistically. While both of these topics are important in their own right, this project is concerned with the fear of contracting HIV/AIDS in individuals who, to their knowledge, have not been exposed to HIV.

Most past psychological research concerning the fear of contracting HIV has used a survey methodology to assess HIV/AIDS attitudes (Cline & Freeman, 1988; Dawson &

Thornberry, 1988; DiClemente, Boyer, & Morales, 1988; DiClemente, Zorn, & Temoshok, 1986; Mouton & McManus, 1986; Price, Desmond, & Kukulka, 1985; Royse, Dhooper, & Hatch, 1987; Simkins & Kushner, 1986; Turner, Anderson, Fitzpatrick, Fowler, & Mayon-White, 1988). Perhaps the most interesting outcome of this research has been the inconsistency of the findings. Many of these studies have indicated that people are extremely concerned about the current spread of HIV and AIDS. For instance, a survey of adolescents by DiClemente et al. found that 78.7% of their subjects were "afraid of getting AIDS." Further, others have reported that fear is pervasive across all segments of the population. Royse, et al. found that their respondents demonstrated high levels of fear irrespective of their age, sex, or race. Oddly, findings from other research presents a very different picture. A number of studies have reported AIDS fear levels are low. For example, Price, et al. report that the majority of their respondents (all of whom were high school students) were not personally worried about contracting AIDS.

Given the variability in these findings, it is surprising that the precise measurement of the fear of contracting HIV/AIDS is not an extensively researched topic. One of the few efforts employing statistical procedures on scale data was conducted by Bouton, Gallaher, Garlinghouse, Leal, Rosenstein, and Young (1987). These researchers used both reliability statistics and factor analysis to assess the utility of their fear scale. The end result of this

project was a highly reliable fourteen-item AIDS fear scale. Further, factor analysis revealed that scale could remain intact. That is, the researchers concluded that AIDS fear (as assessed using the items in their scale) was essentially a unidimensional construct.

Recently, however, my colleagues and I (Glor, Severy, & Wachterman, 1991) and others (Hill, 1988; Turner, et al., 1988) have reported research suggesting that AIDS fear is not unidimensional. The main theme in the results of these studies is that the fear of AIDS can be partitioned into personal fear and a more general type of fear. The distinction is crucial because these two types of fear seem to have independent effects on certain attitudes and behaviors. For instance, Hill found that attitudes toward written condom advertisements were related to subjects' fears about the spread of AIDS in society. However, subjects' evaluations of particular brands of condoms were related to personal fears about contracting the disease.

Glor, et al. conducted two studies directly examining the possibility that the fear of HIV/AIDS is a multidimensional construct. Results from the first study revealed that fear at a societal level was highly related to attitudes toward public policies concerning AIDS, but less strongly related to personal preventive behavior. Reported personal fear of HIV/AIDS, however, was strongly associated with preventive behavior. The second study used an expectancy-value approach (Fishbein & Ajzen, 1975) to investigate attitudes toward and intentions to use condoms.

This study also revealed a distinction between societal and personal fear of HIV/AIDS. Once again only personal fear was associated strongly with attitudes towards and intentions to carry out preventive behavior (condom use). Another key finding in the work by Glor, et al. was that subjects reported relatively high levels of societal fear, but reported personal fear of HIV/AIDS seemed to be very low. The implication is that people are willing to acknowledge that AIDS is a very serious social problem, but not that it has any personal relevance. This finding may help reconcile the inconsistency in past HIV/AIDS fear research regarding apparent HIV/AIDS fear levels. Unfortunately, it also highlights a crucial problem. Many people with little personal fear translates into many people taking little precaution.

Taken as a whole, the bulk of previous research indicates that the fear of HIV and AIDS is a multidimensional construct. But there are some problems with this research as well. The statistical properties of the fear measures were usually not examined. Further, the measures tended to be very short and were probably quite limited in their scope. AIDS has many different undesirable consequences. It may have catastrophic effects on our social structure, our friendships, our family, as well as our own lives. It seems logical, then, to suspect that the number of dimensions of HIV/AIDS fear may go beyond simply personal and general. Each of these dimensions may have unique consequences for our behavior.

PHASE ONE: ASSESSMENT

The initial phase of this research had three aims. The primary goal was the development of a measurement instrument with the ability to tap a wide variety of the components of HIV/AIDS fear. Next, the instrument was subjected to numerous statistical analyses to ensure that it was psychometrically sound. Finally, the relationship between each component of HIV/AIDS fear and a number of other AIDS-relevant factors were examined. This work set the stage for the second phase of the project, which explored the possible theoretical origins of the different components of HIV/AIDS fear.

Hypotheses Regarding Personal Fear

Based on the earlier initiatives, a few hypotheses were put forth. Since past research has shown that personal fear is a separate component of AIDS fear, it was expected that a similar component would emerge in our measurement instrument. This component was predicted to be related to a number of other variables. For instance, self-related fear was predicted to be positively associated with condom use, likelihood of taking preventive measures (in general), a smaller number of recent sexual partners, and being in a relationship. Each of these factors potentially can be viewed as a way to protect oneself from HIV and AIDS and, therefore, alleviate some of the fear. An important

distinction can be made concerning the relationship factor. The longer an individual is in a primary relationship the more protected s/he may feel concerning AIDS. It may be perceived that, as long as one has avoided HIV and AIDS to this point, the relationship offers excellent and constant protection. Therefore, self fear should be negatively associated with the length of a primary relationship. However, currently being in a second relationship could work against this process, continually emphasizing the fact that one has multiple partners. Therefore, the length of a secondary relationship was expected to be positively related to self fear.

Additional Hypotheses

Before stating the remaining hypotheses, it is necessary to preview one aspect of the results of the initial investigation. Analysis of the data from the first sample revealed that four additional dimensions of HIV/AIDS fear (besides self-related fear) exist. These factors were named: 1) emotionality, 2) fear for important others, 3) denial, and 4) fear of nonsexual transmission. Once these factors were discovered, their relationships with additional variables were examined. The predictions regarding these variables are discussed below.

Emotionality

Regarding the emotionality factor, one potentially relevant factor is gender. Research has demonstrated that females respond with more intensity to emotional stimuli than males (Diener, Sandvik, & Larsen, 1985). Given that

HIV and AIDS are emotional topics, it was hypothesized that females would score higher on the emotionality dimension than males.

Fear for Important Others

Fear for important others was hypothesized to be related to knowing someone who has tested positive for HIV. Being faced with this situation may force an individual to realize that people s/he knows are susceptible to HIV transmission. This was expected to translate into heightened fear for those others. (Since people tend to be overly optimistic regarding their own chances of avoiding illness relative to others (Weinstein, 1989), knowing someone who has tested positive was not expected to be associated with self-related fear.)

Denial

The hypotheses regarding denial scores centered around the avoidance of details about HIV and AIDS. High denial scores were expected to be associated with less likelihood of actively seeking out AIDS information and less participation in conversations about AIDS. One means of coping with a threat is by denying its existence or its seriousness (Stone, Cohen, & Adler, 1979). Of course, being exposed to certain situations may force an individual to deal with threatening HIV/AIDS issues, thereby reducing the use of this coping strategy. Those with high denial scores should make a greater effort to avoid such situations than those with low denial scores.

Fear of Nonsexual Transmission

Fear of nonsexual transmission was hypothesized to be related to three variables. First, this component of fear was predicted to be positively related with the belief that AIDS experts are often wrong about how HIV is transmitted. Most researchers tell us that the chances of catching HIV through nonsexual contact are remarkably slight. However, to maintain high levels of fear about such transmission, an individual must not completely accept such reports. Second, an individual with high fear of nonsexual transmission was expected to favor banning students with AIDS from the classroom. To the extent that an individual doubts the experts and experiences high fear of nonsexual transmission, s/he can reduce the fear by taking action that lowers the likelihood of inadvertent contact with persons with AIDS. Third, it was hypothesized that those with high fear of nonsexual transmission would report more negative attitudes toward homosexuality. Early findings relating HIV/AIDS fear and attitudes toward homosexuality were somewhat equivocal (Bouton, et al., 1987; Simkins & Kushner, 1986). However, recent work suggests that the dislike of homosexuality is associated with unfavorable attitudes toward interacting with persons with AIDS in public settings, such as the workplace (Pryor, Reeder, & McManus, 1991; Pryor, Reeder, Vinacco, & Kott, 1989). Judging from the items in the subscale for fear of nonsexual transmission, such settings for casual and inadvertent interaction seem to be at the source of this fear.

One final hypothesis was made regarding the first phase of the project. Ajzen and Fishbein suggest that the specificity of an attitude is crucial in predicting behaviors and behavioral intentions (Ajzen & Fishbein, 1977, 1980; Fishbein & Ajzen, 1975). More precisely, these authors have demonstrated that an attitude and its corresponding behavior should be at similar levels of specificity in order to maximize the attitude's predictive ability. It follows that the use of specific fear measures should improve prediction of specific behaviors beyond the predictive power of a global measure of fear. Therefore, it was predicted that the five dimensions of HIV/AIDS fear would be better predictors of behaviors relevant to them than a single, general measure of HIV/AIDS fear. To the extent that this holds, it is a further demonstration of the utility of treating fear of HIV and AIDS as a multidimensional construct.

METHOD: PHASE ONE

Subjects

In order to devise the measurement instrument and test the above hypotheses, four samples of subjects were collected at four separate times. The first data collection initiative occurred in the fall of 1989. Research assistants distributed surveys to 525 individuals in the Gainesville, Florida, metropolitan area. A large proportion of these subjects were students at the University of Florida, but many were not. Thus, subjects were fairly diverse in age, race, and socioeconomic status. Data from seven of these subjects were not used since their surveys were improperly completed. This left 518 subjects in sample one (289 females and 229 males).

Sample two data were collected in the fall of 1990. All subjects were students in introductory psychology, and data were collected as part of a large prescreening session of the experimental subject pool. Subjects partially fulfilled their experimental requirements. A total of 369 subjects participated, 171 females and 198 males.

The third data collection effort occurred in the spring of 1991. The conditions of data collection were exactly the same as in sample two. A total of 221 subjects (124 females and 97 males) participated.

Data from the fourth sample also were collected in the spring of 1991. There were 60 subjects (41 females and 19 males) who participated in this sample. All subjects were enrolled in an upper-division psychology course. Initially, subjects completed the 29-item HIV/AIDS fear scale. From 1 week to 4 weeks later, the entire scale was re-administered to a subset of these same subjects. This allowed an examination of the test-retest reliability of the components of HIV/AIDS fear. Forty-six subjects (30 females and 16 males) completed the survey a second time. All subjects were given extra credit toward their course grade for their participation.

Questionnaire Development

HIV/AIDS Fear Items

A key to the first phase of this project was attitude item generation. Because only a few tested scales of HIV or AIDS fear exist (e.g., Bouton, et al., 1987), most of the items were developed as a result of an extensive review of the literature on the consequences of HIV and AIDS. The intent was to focus on basic themes that have emerged from the psychological research on HIV/AIDS, particularly with regard to the types of negative impact that AIDS could have on one's life. The result of this phase of the project was a 58-item scale that addressed a number of ways that the fear associated with HIV/AIDS may be expressed. It was expected that exposing these items to psychometric analysis would yield a smaller, more refined instrument to measure HIV/AIDS fear. All items were scored on a six category-

width response scale ranging from 1 (strongly disagree) to 6 (strongly agree).

As a result of refinements based upon sample one data (see below), 29 items were included in subsequent data collection initiatives. Further, some of the original items' wording was altered slightly after the first administration. The ordering of questions in all data collection efforts was randomized.

Additional Items

Other variables were included to examine the relationships between dimensions of HIV/AIDS fear and other relevant factors. Specifically, this investigation examined the relationships between HIV/AIDS fear and: 1) gender, 2) knowing someone who has tested positive for HIV, 3) frequently participating in conversations about AIDS, 4) seeking out information regarding AIDS, 5) believing the experts are often wrong regarding HIV transmission, 6) thinking students with AIDS should be banned from the classroom, 7) attitudes toward homosexuality, 8) number of sexual partners in the last five years, 9) the use of condoms, 10) being in a relationship, 11) the duration of one's primary and, 12) secondary relationships, and 13) the likelihood of performing any preventive behavior.[1]

Most of these factors were assessed on a dichotomous scale ("yes" or "no"). There were six exceptions, however. The number of partners was assessed with a five-category scale ("0 partners," "1 partner," "2-3 partners," "4-10 partners," and " >10 partners"). The durations of primary

and secondary relationships were reported as number of months with that partner. The likelihood of performing preventive behavior was assessed on a scale ranging from 1 ("not at all likely") to 9 ("very likely"). Attitudes toward homosexuality were obtained using the Heterosexual Attitudes Toward Homosexuality (HATH) scale (Larsen, Reed, & Hoffman, 1980). These authors report a split-half reliability for the HATH of .92. The twenty items in this scale were responded to on a scale ranging from 1 ("strongly agree") to 5 ("strongly disagree"). Responses to HATH items were summed to get an overall attitude toward homosexuality.

Notes

[1] Data on factors 1, 2, 8, 9, and 10 were obtained during the first data collection initiative. Data on variables 11, 12, and 13 were obtained during the second data collection effort. Information on factors 3, 4, 5, and 6 was acquired from the fourth sample. Information on factor 7 was obtained from some subjects in the third sample and subjects in the fourth sample. Note that the statistical analyses of these factors, therefore, are based on varying amounts of degrees of freedom.

RESULTS: PHASE ONE

Dimensionality of HIV/AIDS Fear

The initial analysis performed on sample one data was a principal components factor analysis. As the intent was to investigate independent aspects of the fear of HIV/AIDS, an orthogonal rotation was used. This procedure detected the presence of five independent factors. In other words, the analysis suggests there are five unique components of HIV/AIDS fear. Items in each factor were combined to form five subscales.

The next step in the analysis was to eliminate items demonstrating: 1) minimal variation, 2) extreme redundancy, and/or 3) only weak association with any of the five dimensions of HIV/AIDS fear. The issue of association is essentially a question of internal consistency. To assess this, Cronbach's alphas (Cronbach, 1951) were calculated on the items relevant to each of the five dimensions of HIV/AIDS fear. Items suppressing the alphas for the subscales were deleted. As indicated above, the procedures created a final scale of 29 items (see Appendix A). When data from the next two (validation) samples of subjects were analyzed, the subscales remained highly internally consistent. For all three samples, none of the subscale alphas were below .72 and some were as high as .85. For example, the Cronbach's alpha for both the self/partner fear

items and the emotionality items ranged from .80 to .85 across the three samples. The alphas also were satisfactory for the fear for important-others items (.74 to .77), the denial items (.72 to .78), and the fear of nonsexual transmission (.73 to .79).

After the extraneous items had been deleted from the sample one data, a principal components factor analysis with orthogonal rotation was re-conducted with the remaining 29 items.[2] Once again, the most appropriate solution produced five factors. Seven of the twenty-nine items loaded heavily on the first factor, which accounted for 21.5% of the total variation in subjects' responses. This factor was named the emotionality factor, as all seven of the items dealt with the experience of high levels of affect concerning a particular HIV/AIDS issue (see Appendix A). The emotionality factor had an eigenvalue of 6.22, and item loadings ranged from .40 to .77.

The second factor to emerge from the analysis was named self/partner fear. Seven items loaded heavily on this factor, and it accounted for 10.2% of the variation in subjects' responses. The items in this factor addressed concerns that either oneself or one's partner could be susceptible to HIV or AIDS. The eigenvalue of this factor was 2.97 and item loadings ranged from .49 to .72.

Five of the items loaded heavily on the third factor. This factor is clearly distinguished by its focus on other significant relationships in one's life (besides one's partner). For this reason, this factor was named fear for

important others. This accounted for 8.1% of the total variance. It had an eigenvalue of 2.35, and loadings of the five items were between .57 and .68.

The fourth factor also contained five items. All of the items in this factor pertained to one's aversion to thinking about the impact of HIV and AIDS and was therefore named denial. The items cut across a number of social dimensions as they addressed the impact of AIDS on oneself, partners, family, friends, and society. The denial factor accounted for 6.9% of the variation in subjects' responses and had an eigenvalue of 1.97. Items loadings were between .57 and .78.

The final five items loaded heavily on a fifth factor. This factor addressed the possibility that HIV may be contracted through nonsexual interactions and was named fear of nonsexual transmission. This factor accounted for 4.9% of the total variance. Its eigenvalue was 1.41, and item loadings ranged from .64 to .78.

An important question is whether the factor structure found in the data from the first sample of subjects remains intact in other samples and across time. This issue was addressed through analysis of the data from the second and third initiatives of the study. For the most part, the factor structure was extremely consistent. Analysis of the sample two data revealed that the highest loading score for each item was exactly the same as in the data for the first sample. In other words, all of the items loaded most strongly on the same factor as in sample one. This was true

despite a shift in the ordering of the factors in terms of the proportion of variance explained. In the sample two data, self/partner fear accounted for the most variation in the subjects' responses (21.7%), rather than the emotionality factor (10.7%). The fear of nonsexual transmission factor moved to third in proportion of variance explained (8.3%), followed by fear for important others (6.4%) and denial (5.4%).

In the third data collection initiative, only one item loaded on a different factor. An item placed in the self/partner fear factor in samples one and two (concerning being terrified by the thought of a partner being infected) loaded slightly higher on the emotionality factor. The highest loading of all other items was the same as in the sample one and sample two data. Further, the ordering of the factors in sample three data on the proportion of variance explained was the exact same pattern as that found in the first sample. All in all, then, the same independent aspects of HIV/AIDS fear seem to emerge in different samples assessed 12 months and 18 months after the sample one data.

Stability of HIV/AIDS Fear Dimensions

The fourth data collection effort of the initial investigation involved re-administering the HIV/AIDS survey so that test-retest reliability could be calculated for scores on each component of HIV/AIDS fear. The analysis revealed that the five aspects of HIV/AIDS fear are relatively stable constructs. The highest reliability score was for the fear of nonsexual transmission dimension (.90).

The lowest score was for the denial component (.65). This may reflect the issue mentioned above that one's ability to maintain a coping strategy is often a function of uncontrollable and unstable events, such as exposure to information and conversations about AIDS. Test-retest reliability scores for self/partner fear (.87), emotionality (.82), and fear for important others (.78) were all quite high.

Associations Among HIV/AIDS Fear Dimensions

Additional analyses were conducted to determine the degree of association between the different components of HIV/AIDS fear. For this analysis, the four samples were combined to form a grand sample of 1168 subjects. Scale scores were calculated by summing subjects' responses to all the items relevant to each aspect of HIV/AIDS fear. The averages of these scores indicated that both fear of nonsexual transmission (M=2.43) and self/partner fear (M=2.77) were at relatively low levels. Subjects reported moderate levels of fear for important others (M=3.48) and denial (M=3.91). Emotionality scores were reported as fairly high (M=4.39). The standard deviations for all of these means were between 0.98 and 1.11.

Pearson product-moment correlations were then calculated between subjects' scores. The largest correlation was between self/partner fear and fear for important others (r=.51). The emotionality-self/partner fear correlation and the emotionality-fear for important others correlation were both r=.45. In contrast, scores on

the other two aspects of AIDS fear, fear of nonsexual transmission and denial, were only weakly associated with any other scale scores. In fact, none of the correlations involving either of these two dimensions exceeded r=.21. All correlations between the different dimensions of HIV/AIDS fear are reported in Table 1.

HIV/AIDS Fear and Behavior

A final crucial question was whether the different dimensions of HIV/AIDS fear are uniquely related to other factors that may potentially influence AIDS-related behavior. Essentially, this analysis (summarized in Table 2) assessed whether the items in the subscales represent valid measures.

T-tests were conducted to examine many of the relationships between background factors and the five dimensions of HIV/AIDS fear. This analysis revealed that gender was significantly related to subjects' emotionality scores, $t(493)=4.41$, $p<.0001$. The emotionality scores of the female subjects tended to be higher than the scores of male subjects (r=.195). There were no gender effects on any of the other components of HIV/AIDS fear.

A significant relationship between knowing someone who has tested positive for HIV and one's fear for important others also was detected, $t(493)=2.89$, $p<.005$. As expected, subjects who did know someone reported more fear for important others than those who did not (r=.129). No other relationships between knowing someone who has tested positive and the other aspects of fear were significant.

Table 1. Correlations between the dimensions of HIV/AIDS fear

	I	II	III	IV	V
I	1.00	.45	.51	.07	.19
II		1.00	.45	.16	.20
III			1.00	.03	.11
IV				1.00	.17
V					1.00

Note: I = denotes self/partner fear dimension
II = denotes emotionality dimension
III = denotes fear for important others dimension
IV = denotes denial dimension
V = denotes fear of nonsexual transmission dimension

Two items addressed whether subjects are willing to expose themselves to information about AIDS. The first asked whether subjects frequently participated in conversations about AIDS. In line with the hypothesis, subjects who stated that they do often converse about AIDS reported significantly lower denial scores, $t(44)=2.18$, $p<.04$, with $r=-.312$. Answers to this item were not significantly related to any other components of HIV/AIDS fear.

Subjects also were asked whether they were likely to actively seek out information on AIDS. Replies on this item also were related to denial scores, $t(44)=2.93$, $p<.006$. As predicted, subjects stating they were likely to seek information reported lower levels of denial than those stating they were not, $r=-.404$. Surprisingly, self/partner fear, emotionality, and fear for important others also were associated with seeking out information, $t(44)=2.12$, $p<.04$

Table 2. Statistically significant relationships between the dimensions of HIV/AIDS fear and thirteen factors

	I	II	III	IV	V
Gender		***			
Knowing Someone Who Has Tested Positive			**		
Frequently Participate In AIDS Conversations				*	
Actively Seek AIDS Information	*	*	**	**	
Belief That Experts Are Often Wrong					***
Belief That Students With AIDS Should Be Banned From Classroom					*
HATH Score					***
Number Of Partners					
0 versus 1					
1 versus 2-3	***				
2-3 versus 4-10	**				
4-10 versus >10					
Condom Use	***				
Relationship Status	***				
Length Of Primary Relationship	***		*		
Length Of Secondary Relationship	**				
Taking Any Preventive Measures	*[a]			*	

Note: I = denotes self/partner fear dimension
II = denotes emotionality dimension
III = denotes fear for important others dimension
IV = denotes denial dimension
V = denotes fear of nonsexual transmission dimension
* denotes significance at $p<.05$ level
** denotes significance at $p<.01$ level
*** denotes significance at $p<.001$ level
[a] denotes significance for a non-linear effect

(r=.304), t(44)=2.40, p<.03 (r=.340), and t(44)=2.94, p<.006 (r=.405), respectively. However, the relationship between each of these dimensions and information seeking was reversed. Subjects who actively sought information reported higher scores for these three HIV/AIDS fear dimensions.

Another variable that was examined dealt with whether subjects believed that the experts are often wrong about how HIV can be transmitted. As predicted, those subjects who agreed that experts are often wrong tended to have higher fear of nonsexual transmission than those who disagreed, t(44)=3.54, p<.001, with r=.372. Holding this belief was not significantly related to any of the other components of HIV/AIDS fear.

The expected association between fear of nonsexual transmission and the belief that students with AIDS should be banned from the classroom also was significant, t(44)=2.24, p<.03. Those subjects who held this belief reported higher levels of fear of nonsexual contact than did subjects who did not believe in banning students (r=.333). Once again, no other significant relationships were detected between this belief and any of the other dimensions of HIV/AIDS fear.

The final prediction regarding fear of nonsexual transmission involved the HATH scale. Since the HATH score is an interval variable, a multiple regression was conducted using the five fear scores as predictors of subjects' HATH scores. This analysis revealed a strong relationship between HATH scores and fear of nonsexual contact, t(1,

93)=5.85, $p<.0001$. After the effects of the other fear dimensions were partialled out, those with higher fear of nonsexual transmission tended to have a greater dislike of homosexuality ($r=.54$). Subjects' HATH scores were not significantly related to any other AIDS fear dimension.

It was hypothesized that many of the background factors would be uniquely associated with self/partner fear. The first factor to be examined was the subject's number of sexual partners over the past five years. There were five possible responses to this item: 0, 1, 2-3, 4-10, and >10. To test this hypothesis, t-tests were conducted comparing the level of each component of fear for different numbers of partners. As expected, there was no significant difference in self/partner fear for those reporting 0 or 1 sexual partner, $t(165)<1$. Comparing self/partner fear at 1 versus 2-3 partners did reveal a strong association, however, $t(257)=3.71$, $p<.0003$. Those with 2-3 sexual partners reported higher levels of self/partner fear than subjects with 1 partner ($r=.218$). The difference in self/partner fear also was statistically significant between subjects with 2-3 partners versus 4-10 partners, $t(281)=274$, $p<.007$. Once again, those with more sexual partners reported more self/partner fear ($r=.161$). Finally, there was not a significant difference between subjects reporting 4-10 partners versus more than 10 partners. Importantly, none of the t-tests examining partner number revealed a significant relationship with any of the other four aspects of HIV/AIDS fear.

T-tests also were performed to assess the relationship between the five components of HIV/AIDS fear and a dichotomous measure of condom use. As expected, the only significant association that emerged was between condom use and self/partner fear, $t(493)=4.70$, $p<.0001$. Subjects who reported using condoms had significantly higher levels of self/partner fear than those not using condoms ($r=.231$). The other aspects of HIV/AIDS fear were not significantly related to condom use although subjects using condoms reported marginally higher emotionality scores than those not who did not, $t(493)=1.75$, $p<.09$, with $r.079$.

As expected, there was a significant association between one's relationship status and self/partner fear, $t(493)=5.31$, $p<.0001$. In line with our prediction, subjects who were currently in a relationship reported less self/partner fear than subjects not in a relationship ($r=.233$). Relationship status was not significantly associated with any other aspect of HIV/AIDS fear.

Additional tests were performed on three variables that were measured using interval scales. Once again, multiple regression analyses were conducted using the five aspects of HIV/AIDS fear as predictors. Here, the relationships of those five aspects with the length of one's primary current relationship, length of a second current relationship, and likelihood of performing any preventive behaviors were examined. It was predicted that, after partialling out the effects of the other fear types, self/partner fear would be significantly associated with each of these variables.

The analysis strongly supported the hypotheses. Concerning the length of one's primary relationship, a strong negative relationship was found, $t(1,304)=-5.89$, $p<.0001$. The longer an individual was in his or her primary relationship, the lower the self/partner fear tended to be (partial $r=-.32$). Fear for important others also was related to the length of a primary relationship, though to a lesser extent $t(1,304)=2.39$, $p<.02$. Those with higher fear for important others tended to be in these relationships longer (partial $r=.13$).

An entirely different pattern emerged, however, when addressing the length of a secondary relationship. For this factor, a strong positive relationship was revealed with self/partner fear, $t(1,304)=2.83$, $p<.005$. As expected, people who were in secondary relationships for longer periods of time tended to report higher levels of self/partner fear (partial $r=.16$). None of the other aspects of HIV/AIDS fear were related to the length of secondary relationships.

The final variable to be examined was the likelihood of taking any kind of action to prevent AIDS. Though not predicted, a significant relationship was detected between this variable and denial scores, $t(1,304)=-2.32$, $p<.03$. Those with higher denial scores reported being less likely to take preventive action (partial $r=.13$). There also was a marginally significant association between emotionality scores and preventive action, $t(1,304)=1.79$, $p<.08$. Those with high emotionality scores were slightly more likely to

perform preventive behavior (partial r=.10). The strongest relationship with preventive behavior, however, was with self/partner fear, $t(1,304)$=-3.13, p<.002. Contrary to prediction, those with higher self/partner fear reported being less likely to perform preventive behavior (r=-.103). To examine this effect further, an additional term was added to the multiple regression model to measure the non-linear effect of self/partner fear. When the analysis was re-run, this term was found to be significantly related to preventive behavior, $t(1,303)$=-2.28, p<.03, and the linear effect of self/partner fear dropped well below significance levels. The parameters of this term indicated that self/partner fear is related to preventive behavior according to an inverted-U function. That is, as self/partner fear moves from low to moderate levels, preventive behavior becomes more likely. At some point, however, higher levels of self/partner fear become associated with a lower and lower likelihood of performing preventive behavior. The partial r for the non-linear self/partner fear term was .12.

The final hypothesis, based on the theorizing of Fishbein and Ajzen, was that global HIV/AIDS fear would not predict the thirteen variables discussed above as well as the five fear dimensions. To examine this prediction, a single measure of HIV/AIDS fear was formed by summing the scores on the five fear dimensions. Then, the relationships between this score and the thirteen variables were analyzed. The analysis strongly supports the hypothesis. Although

each of the variables was related to a specific HIV/AIDS fear dimension, only three were significantly related to global fear. Global fear was positively related to the use of the condom (though the association was stronger with self/partner fear), $t=2.58$, $p<.02$; positively related to the length of a secondary relationship, $t=3.80$, $p<.0002$; and negatively related to the likelihood of performing any preventive behavior, $t=-2.80$, $p<.006$. In retrospect, this last association may have been expected since global HIV/AIDS fear and the likelihood of taking any preventive action are both fairly general concepts (i.e., are at similar levels of specificity). Thus, the significant relationship between these two factors would be expected, according to Fishbein and Ajzen.

Notes

[2] To ensure that the factor structure was not merely a function of the type of rotation conducted, an oblique rotation also was performed on the sample one data. The results were entirely consistent with the orthogonal solution. All items loaded on the same factors and the order of the factors regarding the proportion of variance explained remained the same.

DISCUSSION: PHASE ONE

Mounting evidence suggests that HIV/AIDS fear is a complex phenomena. The first phase of this project further confirms this by demonstrating that the fear associated with HIV and AIDS is represented by at least five different dimensions. Each may contribute to an individual's overall degree of HIV/AIDS fear but the level of each independent component appears to be a critical consideration.

The main purpose of the initial investigation was to develop a psychometrically-sound measure of the fear of HIV and AIDS which also exhibited construct validity. This task was approached from a variety of perspectives. The scale that was devised demonstrates a replicable factor structure, leading to the creation of five subscales tapping unique aspects of HIV/AIDS fear. Additionally, responses to items in each subscale hang together well enough to exceed acceptable levels for internal consistency. This suggests the scales are measuring unified concepts. While some of the five components are related, they are not overwhelmingly so and two of the components, denial and fear of nonsexual transmission, are only weakly related to any other aspects of HIV/AIDS fear. Further, the dimensions of HIV/AIDS fear appear to be fairly stable constructs as the test-retest reliability of scores for each dimension are quite high.

Finally, the five scales appear to be nomologically valid measures. Factors which intuitively should be associated with a specific component of HIV/AIDS fear do demonstrate such relationships. Self/partner fear also demonstrated unique predictive validity regarding the length of one's relationships, the use of condoms, and the performance of preventive behavior. The most striking aspect of the findings regarding AIDS-relevant factors was that the factors usually demonstrated a strong relationship with only one dimension of HIV/AIDS fear.

The fact that these variables are related to specific aspects of HIV/AIDS fear rather than being associated with all aspects equally (or a single measure of global fear) poses interesting questions for future research. For example, the analysis revealed that knowing someone who has tested HIV positive is positively related only to fear for important others. However, this aspect of HIV/AIDS fear is not strongly related to the reported likelihood of taking preventive measures. According to the present framework, then, simply knowing someone who has tested positive should have little impact on an individual's own preventive action. Of course, it may be that as the number (and "closeness") of HIV-positive people an individual knows increases, the greater the likelihood that self/partner fear will increase as well. This may manifest itself in the performance of preventive behaviors. The multidimensional view presented here may help disentangle such issues.

Another critical issue in AIDS research involves persuading individuals to use preventive measures more consistently. Separate consideration of each component of HIV/AIDS fear may be crucial in such persuasion attempts. The findings of this project suggest that AIDS messages couched in population statistics or directed at aspects of HIV/AIDS fear other than self/partner fear may have little impact on preventive action. To be maximally effective at changing personal health habits, especially concerning condom use, it appears that the information in AIDS campaigns must address protection from HIV and AIDS at a personal level.

All in all, the first phase of this project was quite successful. It lead to the development of a measurement instrument that holds up very well statistically and it indicated a multitude of relationships that help to clarify the associations between HIV/AIDS fear and a full range of AIDS-related behavior. Both of these accomplishments should prove extremely useful in future research efforts on the fear of HIV and AIDS.

A key issue remains unanswered by the initial phase however. This concerns the origins of different fear dimensions. The second phase of this project takes a first step toward examining this topic with the main emphasis on the potential roots of self/partner fear and the fear of nonsexual transmission. In addition, the second phase investigates the relationships between persuasion and AIDS fear dimensions. It is expected that an understanding of

the origins of HIV/AIDS fear will shed some light on how and why AIDS information is related to different fear dimensions. This, in turn, may affect individual's intentions to protect oneself from HIV/AIDS, and their reactions to PWAs.

PHASE TWO: ORIGINS

Functional Theory of Attitudes

One potentially useful approach for examining the origins of different components of HIV/AIDS fear involves the functional theory of attitudes (Katz, 1960; 1968; Smith, Bruner, & White, 1956). This view states that an attitude is held because it serves some purpose (or a number of purposes) for an individual. The functions served are guided by basic human needs and motives. Since the different dimensions of HIV/AIDS fear are essentially specific attitudes (i.e., cognitive and/or affective reactions toward an object or concept) their functions also can be examined using this framework.

According to Katz, attitudes may serve four unique functions: 1) a knowledge function, 2) an ego-defensive function, 3) a utilitarian (instrumental) function, and 4) a value-expressive (symbolic) function. Each of these functions was derived from theorizing in a distinct area of psychology. For example, attitudes serve a knowledge function in that they help an individual to simplify and structure their world. Such attitudes provide frames of reference for organizing and comprehending experiences. For instance, attitudes toward a particular minority may summarize all the information we have about members of this minority. The attitude therefore allows us to treat

minority members as a group rather than individuals. This "top-down" cognitive approach, with its emphasis on how mental structures are used for interpreting the environment, was a focus of Gestalt psychology.

Attitudes also may allow people to avoid dealing with improper impulses or unpleasant realities of their environment. Attitudes serving this function usually involve either a distortion of, or a complete escape from, reality. The idea that cancer is strictly a disease of smokers allows non-smokers to avoid thinking about the consequences cancer may have for them. This is Katz's ego-defensive function and represents the psychoanalytic tradition in psychology.

Katz also suggested a utilitarian (a.k.a. adjustive or instrumental) function. Attitudes serving this function are linked to personal self-interest. They are shaped by the rewards and punishments associated with an attitude object. According to Katz, these attitudes can represent either the method for achieving certain outcomes or the affective reaction to the outcomes. An example would be the attitude that condoms are good because they protect an individual from HIV transmission. Not surprisingly, this function is derived from the principles of learning theory.

The final function in Katz's taxonomy is the value-expressive function. Some attitudes are held because they allow an expression of an individual's central values. For instance, the attitude that imports are bad may be based on highly patriotic values and/or ethnocentrism. Going one

step further, the expression of such attitudes may even help to clarify and shape an individual's self-concept. According to Katz, the foundation for value-expressive attitudes is often laid down early in life via socialization processes. Theorizing about this function comes from the doctrines of ego psychology.

Functional attitude theory as originally stated was somewhat vague and difficult to submit to empirical investigation. Thus, the theory generated little research. Recently, however, there is evidence of a resurgence in the study of attitude functions (Herek, 1986; Prentice, 1987; Shavitt, 1990; Snyder & DeBono, 1985). Much of this increase in attention has involved experimental studies and appears to have overcome the empirical difficulties inherent in the theory. For instance, Snyder and DeBono examined the effects of various advertisement strategies on high and low self-monitors. They found that image-oriented appeals worked best on high self-monitors, while quality-oriented ads had a larger impact on low self-monitors. One way to view their results, suggested by Snyder and DeBono, is that subjects' attitudes toward the ads and the products served different functions. The attitudes of high self-monitors allow them to fit appropriately into the social setting and, thus, may serve a social adjustive function (Smith et al., 1956). Low self-monitors, on the other hand, are concerned with accurately expressing their underlying personal attributes. Their attitudes, then, may serve a value-expressive function.

The resurgence of interest also is attributable in part to reformulations of the original theory into a more simplified framework, such as those suggested by Herek (1986) and Prentice 1987). These researchers believe that the various categorizations put forth by functional theorists can be adequately subsumed using only the instrumental (utilitarian) and symbolic (value-expressive) functions. Prentice, in fact, examined this assertion by investigating the consistency between functions of possessions and attitudes within individuals. She found that individuals who value certain functions in their possessions tend to have attitudes that are based on the same function. This was especially true regarding symbolic functions.

Symbolic Aspects of Stereotypes and Disease

This formulation of functional theory also has been examined in the area of stereotypes and prejudice and has proven to be quite useful. Two research projects nicely demonstrate the potential benefits of the approach. The first involves the work of Sears and Kinder (1985; Kinder, 1986; Kinder & Sears, 1981) on the symbolic and instrumental functions of racial attitudes. A second project was an investigation of the basis of anti-fat attitudes (Crandall & Biernat, 1990).

Research has indicated that racism in today's world no longer involves explicit, white supremacists statements or blatant acts of discrimination (Gaertner & Dovidio, 1986; Kinder & Sears, 1981; McConahay, 1986). This is not to say

that racism has disappeared. Instead, current versions are more subtle. Symbolic racism is one example (Kinder and Sears, 1981). According to Kinder and Sears, symbolic racism is based on sociocultural learning that occurs early in life. Part of this learning involves the acquisition of prejudiced views. In addition, children are taught a number of moral principles and values that are generally accepted in our country, such as the work ethic and individualism. The heart of symbolic racism is that blacks come to represent a violation of such traditional American values. Such racism tends to be expressed most strongly concerning issues such as minority education assistance or equal opportunity employment.

Because this racism represents an expression of deep-seated values (i.e., is symbolically based), it may exist independently of any realistic threats from a particular racial group (i.e., instrumental concerns). Kinder and Sears (1981) tested this idea directly by pitting symbolic racism against realistic group conflict theory while trying to explain voting behavior. In that study, the measure of symbolic racism addressed issues such as whether blacks that get welfare assistance could get along without it or whether blacks have gotten more than they are entitled to. Realistic conflict involved issues such as whether blacks represent any personal economic threat or whether subjects' children would have to be bused. Their results indicate that instrumental concerns did not account for a great deal of the variance in symbolic racism and, more importantly,

symbolic racism was the better predictor of voting patterns in a mayoral gubernatorial race between a white and black candidate. This work effectively illustrates that, not only can attitudes be symbolically based, but attitudes serving this function may actually be more powerful determinants of certain behaviors.

The concept of symbolic attitudes also was applied in the research of Crandall and Biernat (1990). In discussing anti-fat attitudes, these authors point out that the existence of a fat individual poses no true danger to others. Therefore, negative attitudes toward obese people probably do not serve an instrumental function. However, such attitudes may serve a value-expressive function. Similar to symbolic racism, anti-fat attitudes may be based on beliefs that fat people violate basic moral principles and American values, such as the need for discipline, the Protestant work ethic, or individualism. Further, stereotypic views of obese people may emanate from a general, conservative ideology which strongly espouses such values. To test this hypothesis, Crandall and Biernat correlated their measure of anti-fat attitudes with a number of factors thought to be relevant to a highly conservative perspective. The results support the authors' supposition. It was found that negative attitudes toward fat individuals were associated with such factors as symbolic racism, attitudes toward traditional marriage, and political conservatism. The correlations ranged from r=.09 to r=.24. In a second study, anti-fat attitudes were found to

correlate highly with authoritarianism (r=.41). Although causal relationships can not be inferred, this study does suggest that anti-fat attitudes are part of a much more general attitude or ideology which implies disdain for various outgroups. Symbolic attitudes appear to be a key aspect of this phenomena.

Beyond stereotypic attitudes, symbolism also seems to play a role in people's perceptions of disease. This notion has been articulated quite eloquently by Sontag (1977). She claims that often times people's reaction to victims of a disease, and even the victim's reaction to themselves, are based on the symbolic meaning of the disease. For instance, she describes how the metaphoric use of the word "cancer" to refer to some macabre, evil force leads people to view the disease, and its victims, as having these negative characteristics. Symbolic meaning is not restricted to cancer, however. According to Sontag, the meaning of any disease can change simply by perceiving such negative associations. This is consistent with the work of Leventhal and his colleagues (Leventhal, Meyer, & Nerenz, 1980; Meyer, Leventhal, & Gutmann, 1985) who have pointed out how individuals' cognitive representations powerfully influence their responses to the disease. Sontag takes this notion even further, though, in her assertion that a combination of mystery and high levels of fear are sufficient to lead a disease to be viewed as morally contagious. That is, even associating with a victim of the disease is enough to lead one's moral character to be viewed as suspect.

AIDS is another example of a disease that seems to have developed some symbolic meaning. As Herek and Glunt (1988) point out, the physical severity of AIDS in and of itself probably elicits a certain amount of negative affect. By nothing more than chance, however, the vast majority of AIDS cases in the U.S. initially were tied to homosexuality, and a strong association between the two was quickly formed. For many (perhaps most) people, it seems the very mention of the word "AIDS" immediately conjures up images of homosexual activity. Since homosexuals are already a highly stigmatized group, negative attitudes towards AIDS probably have been magnified by this association (Herek & Glunt, 1988). Although incidence rates are shifting somewhat, the most current evidence indicates that the majority of cases are still affecting the homosexual community. Roughly 63% of all AIDS cases reported from April, 1990 through March, 1991 were transmitted solely through homosexual contact (Centers for Disease Control, 1991). This suggests that the negative attitudes connected with homosexuality will probably continue to be associated with AIDS in the future. Of course, even as the frequency of AIDS in heterosexuals does increase, the early associations that have formed probably will prove to be quite resistant to change.

Recently, Pryor and Reeder and their colleagues (Pryor, Reeder, & McManus, 1991; Pryor, Reeder, Vanacco, & Kott, 1989) have provided sound empirical demonstrations of the instrumental and symbolic aspects of attitudes about AIDS. According to these authors, AIDS attitudes that serve a

symbolic function may express people's values regarding moral decadence and promiscuity, especially among homosexuals. PWAs are viewed as violator's of these values. In their studies, the symbolic nature of AIDS attitudes was assessed using the HATH scale. People who score high in their dislike of homosexuals were believed to have more symbolically based AIDS attitudes. Since their studies involved only reactions to non-homosexual PWAs, Pryor, et al. assert that any effects related to prejudice against homosexuals do not reflect instrumental concerns. Instrumental attitudes function to maximize personal self-interest. In the case of AIDS, instrumental attitudes serve to protect the individual from potentially undesirable consequences. The authors conceptualized attitudes with this function using an expectancy-value approach incorporating beliefs and values about AIDS-related consequences (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). Those with higher EV product scores were assumed to have more instrumentally based attitudes.

In the first series of studies, Pryor, et al. (1989) examined two AIDS-related issues: 1) parent's attitudes toward having their children attend a class with another child who has AIDS, and 2) people's desire to drop a class upon discovering that their professor has AIDS. It was found that symbolic attitudes toward AIDS were associated with both of these factors, independent of the effect of instrumental concerns. Instrumental factors, on the other

hand, were related only to parental attitudes toward having their child attend a class with someone who has AIDS.

In Pryor, et al., (1991), subjects' attitudes toward working with an AIDS infected co-worker were examined. Subjects viewed one of two films. Half the subjects saw a film supposedly addressing various instrumental concerns about working with a PWA. The other half of the subjects (the control group) saw a film on robotics. Afterwards subjects both high and low in their dislike of homosexuality (i.e., those with and without symbolically based attitudes) answered a number of attitudinal ratings about working with the PWA. The results indicated a film X homosexuality attitude interaction. Viewing the film on attitudes lead to more positive attitudes towards the PWA, but only for those that had relatively positive attitudes toward homosexuality. For those with negative attitudes toward homosexuality the film had no effect. Pryor, et al.'s interpretation of this effect is that a discussion of instrumental concerns is of little concern for people with symbolic attitudes. Instrumental concerns did, however, affect people who did not have symbolically based attitudes. Unfortunately, it is unclear whether this latter effect was due to the lack of a symbolically based attitude or the presence of an instrumentally based one, since this study did not directly compare reactions of those with symbolic versus instrumental attitudes.

The results of these studies provide support for the role of symbolically based attitudes for AIDS-relevant

issues. The fact that symbolic attitudes were such a strong factor is made even more impressive by the fact that the person with AIDS in each of these studies was described explicitly as non-homosexual. Even though a measure of dislike for homosexuality is used to assess the symbolic nature of the AIDS attitudes, the symbolic disdain felt by subjects in these studies seems to apply to all people with AIDS.

Attitude Functions and HIV/AIDS Fear Dimensions

As mentioned above, to the extent that the different components of HIV/AIDS fear can be considered specific attitudes, functions could be speculated for each. For instance, using the taxonomies suggested by Katz (1960) and Smith et al. (1956), the denial component could represent an ego-defensive attitude (or Smith et al.'s externalization function). People with high denial scores may be attempting to escape the harsh realities of AIDS. Alternatively, individuals with low denial scores (i.e., those that do spend time thinking about AIDS issues) may have AIDS attitudes that serve a knowledge function. That is, their attitudes help provide a cognitive structure for organizing AIDS-related experiences. Fear for important others may play a role in mediating relationships with others and, thus, serve Smith et al.'s social adjustment function or Katz's adjustive (instrumental) function. High scores on the emotionality dimension may reflect people's failure to keep the unpleasant aspects of AIDS out of consciousness and also may be associated with ego defense. On the other hand,

emotionality scores could reflect an instrumental function, with high scores indicating the negative affect associated with an undesirable outcome.

While each of the above possibilities is worthy of investigation, the focus here will be on the remaining two components: self/partner fear and fear of nonsexual transmission. There are two main reasons. First, the two most important psychological issues surrounding AIDS pertain to increases in the use of preventive measures and reactions of the general population to persons with AIDS. The results from the first phase of this project suggest that self/partner fear and fear of nonsexual transmission are the components most directly relevant to these issues. Second, these results also supply some excellent leads concerning the specific functions of self/partner fear and the fear of nonsexual transmission.

The earlier findings indicated that self/partner fear was related to whether an individual is in a relationship, length of a primary relationship, length of a secondary relationship, number of sexual partners, and condom use. In fact, self/partner fear was the <u>only</u> HIV/AIDS fear type strongly associated with these factors. Note that each of these variables pertains to a logical strategy for personally avoiding contraction of HIV/AIDS. This provides fairly strong support that HIV/AIDS attitudes are more likely to be serving an instrumental function for people with higher self/partner fear. That is, they help guide

individuals toward more rewarding outcomes and away from negative consequences.

The first phase of this project also provided some insights into the fear of nonsexual transmission. It was found that, of the five fear dimensions, only fear of nonsexual transmission was related to subjects' beliefs that students with AIDS should be banned from the classroom and that the experts are often wrong about HIV transmission. Such beliefs must be based in a strong, well-established foundation if they can be maintained despite the barrage of contradictory evidence from credible sources. Another key finding was that only fear of nonsexual transmission was associated with reported dislike of homosexuality (using the HATH) and this relationship was very strong (partial r=.54). Pryor, et al. (1989; 1991) have demonstrated that AIDS is more likely to symbolize negative things about homosexuality for people with high scores on the HATH scale. Given the high correlation between HATH scores and fear of nonsexual transmission, it is likely that individuals with higher levels of this type of fear are more likely to have attitudes towards AIDS that serve a symbolic function.

This discussion highlights an important distinction. The work done by Pryor et al. simply demonstrated that a general attitude about AIDS could be symbolically or instrumentally based. According to the framework presented in the current research, instrumental and symbolic attitudes are distinctly represented in two independent HIV/AIDS fear dimensions. It is possible, then, to go beyond the work by

Pryor, et al. (1991) on AIDS education by examining the effects of these two attitudes separately.

The view of certain HIV/AIDS attitudes as symbolic can be carried even further. It is possible that the fear of nonsexual transmission, like symbolic anti-fat attitudes in Crandall and Biernat (1990), is actually part of a much larger, conservative ideology. Recent research indicates that there is indeed some connection between conservatism and measures of general fear of AIDS (Bouton, Gallaher, Garlinghouse, Leal, Rosenstein, & Young, 1989). Echabe and Rovira (1989) report evidence for two unique mental representations of AIDS: a conservative-blaming view and a liberal view. These authors found that an individual's representation apparently lead to selective encoding and distortion of information in a way that was consistent with one's representation. Along these same lines, Witt (1989) reports a moderate correlation (r=.31) between authoritarianism and affect towards people with AIDS.

If the fear-of-nonsexual-transmission component of general HIV/AIDS fear is an important element in such effects, then this dimension of fear should be positively related to a number of factors that are associated with a conservative stance. One such relationship (the correlation with attitudes toward homosexuality) has already been verified. Additional factors will be examined in the second phase of the study.

The evidence discussed above concerning the instrumental nature of self/partner fear and the symbolic

nature of fear of nonsexual transmission is quite convincing. It is important to note, however, that alternative functions for self/partner fear and fear of nonsexual transmission can not be ruled out. It is possible, for example, that the fear of nonsexual transmission may actually serve an instrumental function. High levels on this fear dimension may guide people to avoid even social situations in which persons with AIDS are present solely because negative consequences (transmission of HIV) could occur. Although few would consider such beliefs "rational," they nevertheless represent utilitarian concerns. Perhaps fear of nonsexual transmission is most likely to serve an instrumental function for people with jobs that require contact with bodily fluids. Professions such as paramedic or nurse do carry with them a slightly higher risk of HIV transmission.

It also is conceivable that self/partner fear could serve a symbolic, rather than an instrumental, function. This type of fear (and possibly the effects associated with self/partner fear) may be an expression of an individual's deep-seated values about AIDS and/or sexuality. For instance, AIDS may symbolize promiscuity and the negative affect directed at oneself and one's partner(s) may represent concern about potentially violating one's values. Due to these possibilities, the suppositions that self/partner fear serves an instrumental function and fear of nonsexual transmission serves a symbolic function are

held only tentatively. The results of this project should indicate if these assumptions are justified.

The research proposed here attempts to extend the current knowledge about AIDS fear and AIDS attitudes in several ways. First, while the studies by Pryor et al. examined associations between AIDS attitudes and social interactions, this project investigates a more personal situation; that is, interactions with potential relationship partners. Presumably, the basic assumptions regarding symbolic and instrumental attitudes should apply in this setting as well, and the nature of the associations are of extreme importance to preventive programs. Second, there is no reason to assume that possession of an instrumental or symbolic attitude must be purely dichotomous (have or do not have such attitudes). In this study, the possession of attitudes is viewed as a continuum from not instrumentally based to instrumentally based, or from not symbolically based to symbolically based. This allows a detailed investigation of the effects of the degree to which an attitude serves a particular function. Finally, this phase of the project examines: 1) the effects of the functions served by self/partner fear and the fear of nonsexual transmission, and 2) the effects of different types of information on these attitudes and related behaviors.

A key assumption of functional attitude theory is that, in order to influence an attitude, a message should be directed at the motivational processes that lead to the development of the attitude (Katz, 1960; 1968; Prentice,

1987). It is crucial, therefore, to attend to both the function of the attitude and the nature of the information. For example, people with instrumental AIDS attitudes (i.e., high self/partner fear) are focused on maximizing the positivity of their outcomes regarding AIDS. To effectively accomplish this, attention must be given to information associated with obtaining a favorable outcome. This is consistent with the finding in the initial investigation that subjects with high self/partner fear were more likely to report actively seeking AIDS information. Since most AIDS information seems to address instrumental concerns (Pryor, et al., 1991), people with high self/partner fear should be more willing to search for it.

For those with high fear of nonsexual transmission (i.e., symbolic attitudes), the situation is quite different. These individuals may be unaffected by the usual appeals regarding AIDS. One possible reason is that symbolic AIDS attitudes are integrated into a person's overall ideology (i.e., general attitude) and, therefore, are more resistant to change. An ideology represents a network of more specific attitudes, usually developed throughout one's lifetime. The attitudes that are incorporated are likely to have many, possibly strong, linkages with related attitudes and this undoubtedly requires the integration of a lot of information (i.e., considerable cognitive processing). Further, such attitudes have often been held for a long time and so it is more likely that an individual will have some experience with the

attitude object. Both of these factors have been implicated in the formation of stronger, more accessible attitudes (Fazio & Zanna, 1981; Fazio, 1986). Such attitudes should be less likely to be affected by the presentation of the relatively small amount of information found in most AIDS-related messages (small, that is, relative to the large amount of consistent information on which the ideology is based).

Another reason why symbolic attitudes may not be affected by certain appeals is that the instrumental information in these appeals is simply irrelevant. The basis of a symbolic attitude is the expression of the abstract values associated with it. For information to have some impact it must address these values. This perspective helps clarify a result from the initial investigation. If most information that is provided about AIDS is instrumental in nature then it is not surprising that the fear of nonsexual transmission, which is symbolically based, was the only HIV/AIDS fear dimension unrelated to actively seeking information.

Experimental Design and Hypotheses

Based on the past and current research findings, a number of predictions are put forth for this phase of the project. The first prediction to be tested is that the fear of nonsexual transmission is related to a number of other components that are consistent, with a general, conservative attitude or ideology. In addition to the relationship with dislike of homosexuality (established in the initial

investigation), fear of nonsexual transmission is expected to be positively correlated with racism, anti-fat attitudes, and political conservatism. But what is at the root of the proposed ideology? The prejudicial nature of many of these factors (along with the findings of Crandall & Biernat) suggests one possible basis: an authoritarian view of the world. To explore this possibility, the relationship between fear of nonsexual transmission and authoritarianism also is examined with the expectation that the two are positively correlated. Because self/partner fear is believed to be instrumentally based, it is not expected to be significantly related to these constructs.

The key question in this phase of the project pertains to how attitudes serving different functions are affected by different types of informational messages. To answer this question, three variables are examined. First of all, three types of AIDS messages are incorporated into the study: 1) instrumentally oriented, 2) a symbolically oriented, and 5) a neutral message. Next, the degree to which individuals' attitudes towards AIDS are instrumentally based is included. According to the present framework, this refers to people with various amounts of self/partner fear. Finally, the degree to which attitudes are symbolically based is examined. This refers to individuals with various levels of the fear of nonsexual transmission. Thus, the experiment involves a discrete variable with three levels (Essay Type) and two continuous variables (Self/Partner Fear and Fear of Nonsexual Transmission).

In accordance with functional attitude theory, it is predicted that information messages have the most impact on attitudes for which they are most relevant. In other words, a message regarding personal consequences that may result from AIDS is expected to cue instrumental concerns, leading to arousal of self/partner fear more than either the symbolic or neutral message. Likewise, a message that addresses symbolic issues is predicted to arouse the fear of nonsexual transmission more than the instrumental message or the neutral message. A different pattern of arousal could reflect the possibilities discussed earlier. That is, if self/partner fear is actually symbolically based then the symbolic message should arouse this type of fear, and there should be no effect of the instrumental message. If the fear of nonsexual transmission serves an instrumental function then only the instrumental message should affect this fear dimension.

The effects of this arousal are examined on three sets of dependent measures. The first assesses the subjects' perceptions of the essays. The second set examines attitudes toward performing various precautionary measures involving relationships. The third set of measures involves the HATH scale assessing subjects' attitudes towards homosexuality and items concerning public policy issues relevant to AIDS (see Appendix D). A two-way interaction is predicted on responses to all of these variables.

Two separate two-way interactions are predicted on essay perceptions. First, subjects with higher levels of

self/partner fear are expected to have more positive perceptions of the instrumental essay (i.e., find it more agreeable, interesting, and persuasive) than subjects with less self/partner fear. However, greater self/partner fear is not expected to be associated with more positive perceptions of the symbolic and neutral essays. Second, subjects with greater fear of nonsexual transmission are expected to view the symbolic essay more positively then subjects with lower amounts of this fear. Greater fear of nonsexual transmission is not expected to be associated with perceptions of the other essays.

The interaction for the measures of preventive behavior involves self/partner fear and the message factor. It is predicted that reading an instrumental message leads to an increase in the positivity of attitudes toward performing precautionary measures, but only for those with more instrumentally based attitudes about AIDS (i.e., those higher self/partner fear). Specifically, these individuals are expected to report a greater likelihood of asking about a potential partner's sexual history, of abstaining from sexual activity, and of getting tested for HIV with a new partner, along with a greater importance for being in a monogamous relationship than subjects with less self/partner fear and/or in the other essay conditions.

The interaction on subjects' attitudes toward public policies and HATH scores involves fear of nonsexual transmission and the message factor. It is hypothesized that reading a symbolic message leads to an increase in

subjects' dislike of homosexuality and more conservative views on public policy issues, but only for individuals whose attitudes about AIDS are more symbolically based (i.e., those with higher fear of nonsexual transmission). That is, these subjects are expected to be relatively more favorable regarding mandatory testing of high risk individuals, mandatory testing of people in medical professions, quarantining of people who have tested positive for HIV, and quarantining of individuals who have developed AIDS, along with less favorable attitudes towards condom advertisements and homosexuality.

METHOD: PHASE TWO

Subjects

Four samples were used in this phase of the experiment. To assess the relationship between self/partner fear, fear of nonsexual transmission, and components of a conservative ideology, sample three from the initial investigation was used (221 subjects). Sample two (70 subjects) was used to examine the association between authoritarianism and the two fear types. Sample three involved 39 subjects and was used to pretest materials for the experiment investigating the functions served by self/partner fear and fear of nonsexual transmission. Finally, a total of 265 subjects participated in the experiment. Because the experiment required three sessions, some subject attrition occurred. The major proportion of this attrition was due to subjects either dropping the course or missing class on the day an experimental session was run. This resulted in a total of 210 subjects participating in the first two experimental sessions and 177 subjects participating in all three sessions. All subjects in each of the samples were currently enrolled in an undergraduate psychology class, and either received additional class credit or partially fulfilled a course requirement with their participation.

Procedure

The first sample was part of a large prescreening session of introductory psychology students. All subjects filled out a battery of questionnaires. Embedded within these questionnaires were McConahay's (1986) modern racism scale (Cronbach's alpha of .72), Crandall and Biernat's anti-fat scale (Cronbach's alpha of .68), two items assessing political conservatism (r=.49), and items assessing the level of each HIV/AIDS fear dimension.

The second sample was given two questionnaires. One questionnaire was the 29-item fear scale designed in the initial investigation. The other was a 24-item scale measuring right-wing authoritarianism (Altemeyer, 1982). The order of the two scales was randomized. The authoritarianism items and the political conservatism items are included in Appendix B.

Subjects in the third sample were asked to read either an instrumentally based essay or a symbolically based essay. Katz (1960) suggested that a necessary condition for the arousal of instrumental attitudes is the presence of salient cues associated with satisfying the specific need. Therefore, the instrumental message condition involved a discussion of the potential consequences AIDS may have on relationships. These included catching AIDS, fear of sexual activity and suspicion of partners. To arouse symbolic attitudes, Katz recommended the presence of salient cues involving relevant values. Thus, the symbolic message condition focused on values associated with AIDS. Subjects

read a discussion of how AIDS is associated with promiscuity, the immorality of certain groups, and a general decline in ethical behavior. After reading the essay, subjects were given a definition of the instrumental function of attitudes and the symbolic function of attitudes. They were then asked to rate how instrumentally based and how symbolically based they perceived their essay to be. Responses to these items were made on 7-point bipolar scales ranging from 1 ("Not At All Instrumental" or "Not At All Symbolic") to 7 ("Very Instrumental" or "Very Symbolic").

For the fourth sample, the procedure initially involved pretesting of subjects using the 29-item fear scale (see Appendix A). The experimental session was conducted two weeks later. Before the session, subjects were randomly assigned to the instrumental message, the symbolic message, or the neutral message condition. In the neutral message condition, added to the experiment to as a control, subjects read a description of how AIDS research is funded by governmental agencies. Each of the three messages is reported in Appendix C.

When subjects finished reading this information, they completed a questionnaire. The first section of the questionnaire contained three items examining their perceptions of the essay. Specifically, these items addressed how much the subjects agreed with the essay, how interesting the essay was, and how persuasive they felt the essay was. Responses to these items were made on 7-point

bipolar scales ranging from 1 ("Not Very Much," "Not At All Interesting," and "Not At All Persuasive," respectively) to 7 ("Very Much," "Very Interesting," and "Very Persuasive," respectively). The second section of the questionnaire contained the 29-item fear scale. Responses ranged from 1 ("Strongly Disagree") to 6 ("Strongly Agree"). The third section of the questionnaire assessed subject's attitudes toward a number of AIDS-relevant relationship and public policy issues. Relationship issues included the desire to be in a monogamous relationship, the likelihood of asking about your partner's sexual history, the likelihood of getting tested for HIV with your partner, and the likelihood of abstaining from sexual activity. Responses to the monogamy question were made on a 7-point scale ranging from 1 ("Not Very Important") to 7 ("Very Important"). Responses to the latter three questions were made on 7-point scales ranging from 1 ("Not Very Likely") to 7 ("Very Likely"). The public policy questions addressed how much subjects favored mandatory HIV testing of people in "high risk" groups, mandatory testing of people in the medical profession, quarantining of individuals who have tested positive for HIV, quarantining of AIDS patients, and television ads promoting condom use. Responses to all public policy questions were made on 7-point scales ranging from 1 ("Not Very Much") to 7 ("Very Much"). In the final section of the questionnaire, subjects completed the HATH scale. Responses to HATH items also were made on a 7-point scales ranging from 1 ("Strongly Disagree") to 7 ("Strongly

Agree"). Essay perception, relationship, public policy, and HATH items are contained in Appendix D.

In order to examine whether the manipulation had a lasting impact, a posttest session was conducted. One week after subjects had participated in the experimental session they were asked to respond again to the items addressing relationship issues, public policy issues, and attitudes toward homosexuality (HATH).

RESULTS: PHASE TWO

Fear Dimensions and a Conservative Ideology

The first hypothesis to be examined involved the relationship between fear of nonsexual transmission and other conservative belief structures. Recall that in the initial investigation there was a strong association between subjects' HATH scores and fear of nonsexual transmission (r=.52). Along with this finding, it was expected that significant positive correlations would obtain between this fear dimension and measures of racism, anti-fat attitudes, and political conservatism. Further, it was expected that self/partner fear would not be consistently related to these factors, since it is not believed to be integrated into this ideological framework.

This hypothesis was largely supported. With a sample consisting of 221 subjects, the fear of nonsexual transmission was found to be positively correlated with self-ratings of racism (r=.192, p<.005), anti-fat attitudes (r=.220, p<.001), and political conservatism (r=.298, p<.0001). On the other hand, self/partner fear was significantly correlated only with anti-fat attitudes (r=.240, p<.0003). The correlations with racism and political conservatism were not statistically significant.

It also was hypothesized that subjects' scores of authoritarianism and fear of nonsexual transmission would be

associated. Consistent with this prediction, analysis conducted on the data from 70 subjects revealed a very strong, positive correlation between these two variables (r=.484, p<.0001). As expected the correlation between self/partner fear was much smaller and was not statistically significant (r=.195, p>.10).

Since Crandall and Biernat (1990) found sex differences in the correlations between authoritarianism and anti-fat attitudes, differences based on gender were examined here as well. Since 15 out of 70 subjects in this sample were not properly coded for gender, this analysis involved 25 men and 30 women. Consistent with earlier work, the correlation between fear of nonsexual transmission and authoritarianism was somewhat stronger for men (r=.615, p<.0003) than for women (r=.456, p<.03). However, the test for differences between these two correlation coefficients was not significant, z=.782, p>.40. These results should be interpreted with caution, however, given the small number of subjects who were included in this analysis.

Pretest of Instrumental and Symbolic Essays

The instrumental and symbolic essays were pretested to ensure that they were perceived as addressing such concerns. T-tests on ratings of subjects' perceptions were conducted comparing the groups that read either the symbolic or the instrumental essay. As expected, subjects in the instrumental essay condition rated their essay as being more instrumentally based (M=4.60) than subjects in the symbolic essay condition (M=3.39, t=2.22, p<.04). Further, the

subjects in the symbolic essay condition rated their essay as more symbolically based (M=5.28) than subjects in the instrumental essay condition (M=3.90, t=2.37, p<.03).

Fear Dimensions, Relationships, and Public Policies

The remaining analyses were conducted on the data generated by the three-session experiment. Recall that the problem of attrition resulted in fewer subjects being included in each experimental session. The first question addressed, then, was whether there were any differences between subjects who did versus did not participate in each session on the variables included in this study. This was not the case. The self/partner fear and fear of nonsexual transmission of subjects who participated in each session were nearly identical. There also appeared to be no differences in age, gender, or race between subjects who participated in sessions one, two, and three.

The next set of analyses examined the effects of self/partner fear, fear of nonsexual transmission, and the essay manipulation on essay perceptions, attitudes regarding AIDS-relevant relationship issues, and attitudes towards AIDS-relevant public policies and homosexuality (see Appendix D). Since there was a substantial amount of correlation between subjects' reported self/partner fear and fear of nonsexual transmission (r=.27), two separate multiple regression analyses were conducted. One analysis included self/partner fear, the essay manipulation, and the interaction between the two as predictors in the model. The second analysis included fear of nonsexual transmission, the

essay manipulation, and their interaction as predictors. The key predictions in these analyses involved the interaction between the essay manipulation and one of the HIV/AIDS fear dimensions. When the predicted interaction did not obtain in either of the analyses, the interaction terms were dropped from the regression model and the analyses were re-run to examining possible main effects of essay type and fear dimension.

Turning first to the multiple regression that included self/partner fear, the hypotheses regarding subjects' perceptions of the essays were strongly supported. A significant interaction between self/partner fear and essay type emerged such that ratings of the agreeableness of the instrumental essay tended to be larger for those with higher self/partner fear than those with low self/partner fear. This relationship was reversed in the symbolic essay condition and a test of the difference in slopes between the instrumental and symbolic essay condition was marginally significant (t=1.70, p<.10). The relationship also was negative in the control condition and the difference in slopes between the control and the instrumental essay condition was statistically significant (t=2.19, p<.03).

A comparable interaction emerged on ratings of interest and persuasiveness. Higher self/partner fear was associated with perceptions that the essay was more interesting, but this relationship only occurred in the instrumental essay condition. Significant differences in the fear effects were found between the instrumental essay condition and the

symbolic essay condition (t=2.81, p<.006), and between the instrumental essay condition and the control condition (t=3.08, p<.003). Likewise, the positive relationship between self/partner fear and persuasiveness ratings was found only in the instrumental essay condition. This self/partner fear effect differed significantly from the effect found in the symbolic essay condition (t=1.98, p<.04) and the control condition (t=2.15, p<.04).

Next, the effects on attitudes towards various relationship issues were examined (see Appendix D). Each of these issues pertained to a means for reducing one's chances of becoming infected with HIV (and potentially reducing self/partner fear). For instance, subjects were asked to report the likelihood that they would discuss a potential partner's sexual history. As expected, the analysis revealed a significant interaction. Greater self/partner fear was associated with a greater likelihood of asking about a partner's sexual history for subjects reading the instrumental essay. This relationship was stronger in the instrumental essay condition than in the symbolic essay condition (t=3.29, p<.002) and the control essay condition (t=2.12, p<.04).

Subjects also were asked how much they would like to be in a monogamous relationship. Once again, the analysis revealed a significant interaction between self/partner fear and essay type. There was a more positive relationship between self/partner fear and preference for a monogamous relationship in the control condition and the instrumental

essay condition relative to the symbolic essay condition (t=2.93, p<.004 for the instrumental versus symbolic comparison and t=2.15, p<.04 for the symbolic versus control comparison). The relationship between self/partner fear and preference for a monogamous relationship did not differ significantly for the control and instrumental essay conditions.

The effects of the independent variables were examined on attitudes towards two other relationship issues. These were the subjects' reported likelihood of abstaining from sexual activity and the likelihood that the subject and a new partner would get tested for HIV. Contrary to predictions, the analysis yielded no significant interaction between self/partner fear and essay type, nor any main effects of these variables.

The regression analysis also was conducted to determine if self/partner fear was involved in any effects on attitudes toward public policy issues or homosexuality. As expected, self/partner fear did not significantly predict any of these dependent variables.

Taken as a whole, the analysis largely supported the hypotheses put forth regarding self/partner fear. The most consistent effect was the interaction between essay type and self/partner fear. As expected, this interaction played a role in subjects' perceptions of the essays and in subject's attitudes toward taking precautions to avoid negative personal consequences. It did not affect attitudes toward issues that were less directly tied to personal outcomes

(public policy issues and attitudes toward homosexuality). The slopes of the regression lines (i.e., the beta weights) for the three essay conditions on each dependent variable are reported in Table 3. To facilitate comparisons across the dependent variables, the standardized beta weights also are included.

To provide descriptive statistics for these results, subjects were divided into high and low self/partner fear based on a median split. Means scores on each of the dependent variables were calculated for subjects with high or low fear. This was done in each essay condition. These results are reported in Table 4.

Next, the effects of fear of nonsexual transmission were examined. A multiple regression analysis was conducted which included this fear dimension, essay type, and their interaction in the model. It was hypothesized that a significant interaction between essay type and fear of nonsexual transmission would occur on ratings of essay perceptions, attitudes towards public policy issues, and attitudes toward homosexuality. Where this interaction did not obtain, a secondary regression analysis was conducted without the interaction terms in the model.

As mentioned above, the three items pertaining to essay perceptions addressed whether the essay was agreeable, interesting and persuasive. As expected, the analysis revealed a significant interaction between essay type and fear of nonsexual transmission on agreement ratings. There was a positive relationship between this fear and ratings of

Table 3. Beta Weights Between Self/Partner Fear and the Dependent Variables for Each Essay Condition

Dependent Variable	Control Beta	Instrumental Beta	Symbolic Beta
Agreement	-.25[a] (-.18)	.25[b] (.55)	-.13[a,b] (-.03)
Interest	-.24[a] (-.18)	.39[b] (.77)	-.18[a] (-.25)
Persuasivness	-.28[a] (-.21)	.21[b] (.53)	-.24[a] (-.14)
Abstinence	.19[a] (.10)	.31[a] (.22)	-.22[a] (-.28)
Asking About Sexual History	.24[a] (.12)	.97[b] (.85)	-.15[a] (-.25)
Preference For Monogamy	.32[a] (.24)	.53[a] (.57)	-.13[b] (-.40)
Testing For HIV	-.16[a] (-.09)	.12[a] (.22)	-.03[a] (.11)
Mandatory Testing of High Risk Groups	.14[a] (.07)	.13[a] (.06)	-.01[a] (-.08)
Mandatory Testing of Medical Profession	.12[a] (.07)	.06[a] (-.01)	.11[a] (.06)
Quarantining of HIV Positive People	-.05[a] (-.03)	-.37[a] (-.39)	-.09[a] (-.06)
Quarantining of AIDS Patients	.01[a] (.00)	-.23[a] (-.27)	-.09[a] (-.11)
Condom Ads	-.23[a] (-.18)	.14[a] (.41)	.11[a] (.31)
HATH Scores	-.05[a] (-.00)	4.14[a] (.32)	2.98[a] (.21)

Note: Beta weights with the same superscript do not differ significantly at $p=.05$. Standardized beta weights are in parentheses.

Table 4. Mean Scores and Standard Deviations of Subjects Low or High in Self/Partner Fear for Each Essay Condition

Low Fear Subjects

Dependent Variable	Control Mean	S.D.	Instrumental Mean	S.D.	Symbolic Mean	S.D.
Agreement	5.55	1.41	4.50	1.32	6.07	1.23
Interest	4.10	1.50	4.17	1.32	5.10	1.18
Persuasivness	4.48	1.48	4.08	1.38	5.20	1.25
Abstinence	2.23	2.02	2.35	1.98	2.71	2.02
Asking About Sexual History	4.70	2.27	4.43	1.85	5.24	1.81
Preference For Monogamy	6.03	1.59	5.73	1.54	6.43	1.02
Testing For HIV	3.93	2.04	4.00	1.94	3.67	1.83
Mandatory Testing of High Risk Groups	5.28	2.14	5.43	1.97	4.74	1.98
Mandatory Testing of Medical Profession	5.75	1.93	5.65	1.83	5.31	1.96
Quarantining of HIV Positive People	3.25	1.98	3.35	1.72	2.83	1.68
Quarantining of AIDS Patients	3.28	2.17	3.41	1.57	2.95	1.59
Condom Ads	6.48	1.26	6.03	1.48	6.38	1.10
HATH Scores	90.80	31.85	86.86	24.08	94.76	25.61

High Fear Subjects

Dependent Variable	Control Mean	S.D.	Instrumental Mean	S.D.	Symbolic Mean	S.D.
Agreement	5.20	1.25	4.83	1.38	5.51	1.31
Interest	3.55	1.52	4.91	1.02	4.77	1.24
Persuasivness	4.05	1.43	4.26	1.04	4.83	1.18
Abstinence	2.78	2.49	3.21	1.85	2.54	2.28

Table 4--continued.

	High Fear Subjects					
Dependent Variable	Control Mean	S.D.	Instrumental Mean	S.D.	Symbolic Mean	S.D.
Asking About Sexual History	4.98	2.21	6.16	1.42	5.16	2.11
Preference For Monogamy	6.38	1.19	6.82	0.43	6.05	1.82
Testing For HIV	3.11	1.72	3.55	1.73	3.59	2.01
Mandatory Testing of High Risk Groups	5.62	1.70	5.82	1.15	5.38	1.93
Mandatory Testing of Medical Profession	5.98	1.60	5.70	1.11	5.81	1.70
Quarantining of HIV Positive People	2.87	1.67	2.27	1.68	2.95	1.75
Quarantining of AIDS Patients	2.98	1.79	2.43	1.83	3.05	1.81
Condom Ads	6.04	1.72	6.46	1.31	6.51	0.99
HATH Scores	86.31	29.76	85.38	22.39	95.92	30.92

agreement, but only in the symbolic essay condition. Significant differences in this relationship were found between the symbolic essay condition and the instrumental essay condition (t=2.37, p<.02), and between the symbolic essay condition and the control condition (t=2.19, p<.03).

There also was a significant interaction on ratings of essay interest. Higher levels of fear of nonsexual transmission were associated with higher ratings of interest for subjects in the symbolic essay condition, but not in the instrumental essay condition (t=2.62, p<.01). Although similar differences were found between the symbolic essay

condition and the control condition, the effect was not strong enough to reach accepted levels of statistical significance.

The same can be said for ratings of essay persuasiveness. Subjects with higher fear of nonsexual transmission tended to have higher persuasiveness scores in the symbolic essay condition, but the opposite relationship was found in the instrumental essay condition and the control condition. However, no statistically significant effects obtained on this variable.

Turning to the public policy items, two questions addressed the issue of mandatory testing for HIV (see Appendix D). The analysis revealed a significant interaction between fear of nonsexual transmission and essay type on attitudes towards mandatory testing of high risk individuals. High fear was associated with more favorable attitudes in the symbolic essay condition and the control condition, but this relationship did not obtain in the instrumental essay condition (t=1.82, p<.08 for the symbolic versus instrumental comparison and t=2.28, p<.03 for the control versus instrumental comparison). The relationship between this fear dimension and beliefs about mandatory testing of high risk groups did not differ significantly between the symbolic essay condition and the control condition.

This public policy issue also was examined regarding mandatory testing of people in medical professions. No significant interaction was revealed by the analysis, but a

significant main effect of the fear of nonsexual transmission did obtain (t=2.43, p<.02). Higher fear of nonsexual transmission was associated with more favorable attitudes towards mandatory testing of people in medical professions.

Two questions were included that addressed the issue of quarantines. The first item asked how much the subject favors quarantining of people who have tested positive for HIV. The second asked how much the subject favored quarantining of people who have developed AIDS. The only significant effect found for ratings on both these items was a main effect of fear of nonsexual transmission (t=6.59, p<.0001 and t=5.90, p<.0001, respectively). For both issues, higher fear of nonsexual transmission was associated with more favorable attitudes toward such a policy.

Another public policy issue investigated was the use of television ads to promote condom use. No statistically significant differences were found on ratings for this item. In line with the hypothesized effect, though, high fear of nonsexual transmission was more strongly associated with less favorable attitudes towards condom ads in the symbolic essay condition than in the control condition.

The final prediction concerning the fear of nonsexual transmission pertained to subjects' HATH scores. The analyses revealed a significant interaction between this fear dimension and essay type. Surprisingly, the negative relationship between fear of nonsexual transmission and favorable attitudes about homosexuality was stronger in the

control condition than in the instrumental essay condition (t=3.64, p<.0003) and the symbolic essay condition (t=2.04, p<.05). In line with predictions, though, the relationship between this type of fear and HATH scores was marginally stronger in the symbolic essay condition than the instrumental condition (t=1.63, p<.104).

Fear of nonsexual transmission was not expected to be predictive of attitudes towards the relationship issues included in the study. Nevertheless, the interaction between this fear and essay type was related to ratings on three of these issues. First, there was a stronger negative relationship between fear of nonsexual transmission and the likelihood of asking about your partner's sexual history for subjects in the instrumental essay condition than for subjects in the symbolic essay condition (t=2.05, p<.05) and the control condition (t=2.60, p<.02). This negative relationship contrasts the positive relationship between self/partner fear and scores for this dependent variable in the instrumental essay condition.

A similar pattern emerged on ratings of subjects' preference for being in a monogamous relationship. Higher fear was associated with less preference in the instrumental essay condition. This relationship was marginally weaker in the control condition (t=1.72, p<.09), and was reversed for subjects in the symbolic essay condition (t=3.14, p<.002). Again, this contrasts the effects of self/partner fear in the instrumental condition.

Finally, there was a marginally significant interaction on ratings of the likelihood of getting tested for HIV with a new partner. High fear of nonsexual transmission was associated with a lower likelihood for people in the symbolic essay condition, but this relationship was reversed for people in the instrumental condition (t=1.95, p<.06).

Though not as definitive as the analysis involving self/partner fear, the findings for fear of nonsexual transmission supported the prediction that this fear was related to a number of public policy issues and attitudes toward homosexuality. Unexpectedly, fear of nonsexual transmission also was related to certain relationship issues. Possible reasons for this are discussed below. The beta weights from this analysis for the three essay conditions on each dependent variable are reported in Table 5. Standardized beta weights also are included.

To provide descriptive statistics, subjects were categorized as having high or low fear of nonsexual transmission based on a median split. Means scores on each of the dependent variables were calculated for these two groups in each essay condition. These results are reported in Table 6.

Persistence of Experimental Effects

An important question concerns whether the differences in attitudes reported immediately after the experimental manipulation were relatively stable and enduring. In order to examine this prospect, subjects were asked one week later to respond again to the relationship, public policy, and

Table 5. Beta Weights Between Fear of Nonsexual Transmission and the Dependent Variables for Each Essay Condition

Dependent Variable	Control Beta	Instrumental Beta	Symbolic Beta
Agreement	$-.11^{a}$ (-.09)	$-.15^{a}$ (-.11)	$.36^{b}$ (.35)
Interest	$-.11^{a,b}$ (-.08)	$-.33^{a}$ (-.27)	$.22^{b}$ (.22)
Persuasivness	$.00^{a}$ (-.00)	$-.04^{a}$ (-.03)	$.13^{a}$ (.12)
Abstinence	$-.30^{a}$ (-.16)	$-.09^{a}$ (-.04)	$.21^{a}$ (.15)
Asking About Sexual History	$.05^{a}$ (.03)	$-.79^{b}$ (-.44)	$-.13^{a}$ (-.09)
Preference For Monogamy	$-.17^{a,b}$ (-.15)	$-.50^{b}$ (-.46)	$.19^{a}$ (.13)
Testing For HIV	$-.16^{a}$ (-.09)	$.21^{a}$ (.14)	$-.38^{a}$ (-.23)
Mandatory Testing of High Risk Groups	$.54^{a}$ (.31)	$-.14^{b}$ (-.10)	$.40^{a,b}$ (.21)
Mandatory Testing of Medical Profession	$.25^{a}$ (.16)	$.27^{a}$ (.17)	$.28^{a}$ (.18)
Quarantining of HIV Positive People	$.73^{a}$ (.44)	$.85^{a}$ (.52)	$.51^{a}$ (.28)
Quarantining of AIDS Patients	$.75^{a}$ (.44)	$.81^{a}$ (.48)	$.42^{a}$ (.21)
Condom Ads	$.09^{a}$ (.07)	$-.19^{a}$ (-.17)	$-.14^{a}$ (-.16)
HATH Scores	-16.01^{a} (-.65)	-1.95^{b} (-.04)	-8.18^{b} (-.28)

Note: Beta weights with the same superscript do not differ significantly at $p=.05$. Standardized beta weights are in parentheses.

Table 6. Mean Scores and Standard Deviations of Subjects Low or High in Fear of Nonsexual Transmission for Each Essay Condition

Low Fear Subjects

Dependent Variable	Control Mean	Control S.D.	Instrumental Mean	Instrumental S.D.	Symbolic Mean	Symbolic S.D.
Agreement	5.49	1.27	4.91	1.32	5.57	1.31
Interest	3.79	1.40	4.88	1.13	4.79	1.20
Persuasivness	4.13	1.17	4.12	1.16	5.02	1.32
Abstinence	2.70	2.37	2.98	1.86	2.50	2.09
Asking About Sexual History	4.70	2.23	5.84	1.79	5.45	1.82
Preference For Monogamy	6.28	1.28	6.70	0.72	6.39	1.20
Testing For HIV	3.48	1.99	3.64	1.85	4.11	1.96
Mandatory Testing of High Risk Groups	5.00	1.95	5.72	1.48	4.57	2.10
Mandatory Testing of Medical Profession	5.70	1.83	5.67	1.23	5.20	2.00
Quarantining of HIV Positive People	2.58	1.62	2.16	1.83	2.48	1.73
Quarantining of AIDS Patients	2.56	1.69	2.31	1.82	2.59	1.67
Condom Ads	6.10	1.65	6.41	1.43	6.59	0.90
HATH Scores	101.58	26.37	87.67	22.23	99.66	28.06

High Fear Subjects

Dependent Variable	Control Mean	Control S.D.	Instrumental Mean	Instrumental S.D.	Symbolic Mean	Symbolic S.D.
Agreement	5.27	1.39	4.41	1.52	6.11	1.17
Interest	3.82	1.64	4.25	1.27	5.14	1.22
Persuasivness	4.36	1.68	4.31	1.31	5.11	1.199
Abstinence	2.36	2.23	3.18	2.16	3.14	2.29

Table 6--continued.

	High Fear Subjects					
Dependent Variable	Control Mean	S.D.	Instrumental Mean	S.D.	Symbolic Mean	S.D.
Asking About Sexual History	4.98	2.24	4.94	1.72	4.84	2.10
Preference For Monogamy	6.16	1.51	6.06	1.34	6.03	1.82
Testing For HIV	3.51	1.87	3.78	1.84	3.43	1.86
Mandatory Testing of High Risk Groups	5.87	1.80	5.61	1.52	5.49	1.80
Mandatory Testing of Medical Profession	6.02	1.70	5.85	1.44	5.89	1.59
Quarantining of HIV Positive People	3.47	1.91	3.52	0.87	3.27	1.68
Quarantining of AIDS Patients	3.62	2.08	3.58	1.15	3.38	1.74
Condom Ads	6.38	1.42	6.12	1.27	6.32	1.16
HATH Scores	76.73	29.69	84.61	21.50	86.32	25.52

HATH items. Difference scores were created for each variable by subtracting time two responses from time one responses. Subjects also were placed into high and low self/partner fear groups, and high and low fear of nonsexual transmission groups based on median splits. Two types of analyses were then conducted. First, the correlations between time one ratings and time two ratings were calculated and examined. For the second analysis, t-tests were conducted to determine if any of these scores were significantly different from zero (i.e., if time two scores were significantly different from time one scores). Both of

these analyses were done for the population as a whole, and within the instrumental essay-high self/partner fear group and the symbolic essay-high fear of nonsexual transmission group. These last analyses was conducted since it was these two groups that were hypothesized to be driving the effects.

Not surprisingly, the correlations between each variables' time one and time two score were quite high. With the exception of the ratings of the likelihood of asking your partner about their sexual history, all of the correlations were over r=.50. The correlations ranged from r=.42 to r=.88. This suggests that, for all variables, responses at both times tended to be similar. The correlations calculated for the instrumental essay-high self/partner and the symbolic essay-high fear of nonsexual transmission were quite compatible with the overall correlations. Most of these more specific correlations were very close to the overall coefficients and those that were more discrepant were neither consistently larger nor smaller.

T-tests were conducted for the entire sample revealed that scores on three variables changed significantly from time one to time two. Only ratings of the likelihood of abstaining from sexual activity and how favorable subjects were about mandatory testing of all high-risk individuals dropped over time (t=-4.11, p<.0001 and t=-1.78, p<.08, respectively). HATH scores increased significantly from time one to time two (t=2.42, p<.02), indicating that people developed more positive attitudes towards homosexuality.

The analyses focusing on the specific essay type and fear dimension also revealed few differences. In the instrumental essay-high self/partner fear group, how favorable subjects were towards mandatory testing of high-risk individuals, towards mandatory testing of people in the medical professions, and towards television condom ads dropped (t=-2.67, p<.02, t=-1.87, p<.08, and t=-1.72, p<.10, respectively). In the symbolic essay-high fear of nonsexual transmission group, the analysis revealed only a marginally significant drop in subjects' ratings of how favorable it would be to quarantine people who test positive for HIV (t=-1.77, p<.10).

Overall, this analysis suggested that the subjects' ratings of the dependent variables remained quite stable. While there was some shifts between time one and two, most of them were not large. In fact, over half of the differences reported in the t-test analysis were only at marginal levels of significance. It is important to note that none of the variables that shifted within the instrumental essay-high self/partner fear or the symbolic essay-high fear of nonsexual contact groups were involved in the fear dimension by essay type interactions.

DISCUSSION: PHASE TWO

HIV/AIDS Fear and Ideology

Recent evidence suggests that general attitudes towards AIDS are related to conservatism (Bouton, et al., 1989; Echabe & Rovira, 1989) and authoritarianism (Witt, 1989). One goal of this project was to examine the possibility that the fear of nonsexual transmission, but not self/partner fear, is part of a conservative/authoritarian ideology. The results suggest this is the case. Fear of nonsexual transmission is positively associated with negative views of a number of other groups. These include homosexuals, blacks, and obese people. Further, self-ratings of the latter three attitudes are highly correlated with each other (r=.25 to r=.40). Clearly, there is strong evidence that inter-relationships exist between these attitudes. Fear of nonsexual transmission also is closely tied to a conservative political view and an authoritarian personality. Thus, a person with high fear of nonsexual transmission appears to be someone who has little tolerance for any type of deviance and who harbors a great deal of negative affect towards various outgroups.

Unlike fear of nonsexual transmission, self/partner fear apparently is not a part of an authoritarian ideology. Only small correlations were observed between self/partner fear and most of the ideological components. Of course,

this does not rule out that self/partner fear could be a part of some other ideological framework.

The items in the fear of nonsexual transmission scale seem innocuous enough. They assess people's fears about being exposed to HIV during the course of their job or during everyday social interactions. Why, then, is this fear so closely related to a number of prejudiced attitudes? Recall that about 90% of the reported cases of AIDS are linked to homosexuality or IV drug use (Centers for Disease Control, 1991). These numbers may change as AIDS cases increase in other segments of the population. Currently, though, stating a strong aversion to casual contact with a PWA amounts to expressing an aversion to interactions with anyone who is probably a homosexual or IV drug user. Since social sanctions prohibit the open denigration of most outgroups, endorsement of the items in this scale also provides a "safe" means for communicating a preference for avoiding such interactions. At face value it is only a concern for personal safety that seems to be communicated, rather than contempt for homosexuals and/or IV drug users. Certainly this scenario need not be true of everyone who reports high fear of nonsexual transmission, but the correlations with the HATH scale and other prejudiced attitudes suggest that many of these individuals are inclined towards such beliefs.

It is possible to speculate on the nature of the relationship between fear of nonsexual transmission and a conservative/authoritarian ideology. Although causal

connections can not be determined from these results, it is unlikely that a specific fear of interaction with PWAs drives a general authoritarian view of the world. It is logically consistent, however, for an aversion to such interactions to follow from the general belief that any type of deviance is reprehensible. This belief "justifies" prejudiced attitudes towards homosexuals, IV drug users, and other minorities (see Crandall & Biernat, 1990).

Findings Regarding the Fear Dimensions

The results for self/partner fear strongly support the hypotheses. When reading an essay on the negative consequences AIDS can have for relationships, subjects with high self/partner fear rated the essay more agreeable, interesting, and persuasive. These subjects also reported a greater likelihood of performing various preventive behaviors, such as asking about a partner's sexual history or being in a monogamous relationship. What is most impressive about these findings is their consistency. The predicted interaction was statistically significant for five out of seven of the dependent variables. Even when this effect did not obtain, the differences in slopes for the three essay conditions were in the expected direction (see Table 3). As expected, self/partner fear is not strongly associated with attitudes towards public policies or homosexuality.

The simplest explanation for these results is that self/partner fear is based on instrumental concerns. That is, self/partner fear serves to guide people away from

negative outcomes and towards positive outcomes. For people with lower levels of this fear, such concerns are not as important. Therefore, when these concerns are cued by a message, only people high in self/partner fear become more positive about performing preventive measures.

The findings regarding fear of nonsexual transmission were not as clear cut. Predicted interaction effects were significant for only three of the nine relevant dependent variables. However, certain trends did emerge. For instance, within the symbolic essay condition, the slope of the regression line was in the expected direction for every dependent variable. Aside from the cases where only a significant main effect of fear of nonsexual transmission obtained, five out of six of the predicted effects were stronger in the symbolic essay condition than in the instrumental condition. These findings indicate that, although the hypothesized effects were weak, they were present.

The lack of a significant interaction on certain public policy ratings may be due to a number of factors. It could be that the symbolic essay did not address people's values, or at least not the values relevant to fear of nonsexual transmission. This argument is weakened somewhat by the results of the pretest and the finding that the interaction did obtain on some ratings. Another explanation would be that the essay did cue appropriate values, but certain public policy issues are not relevant to the values underlying symbolic attitudes about AIDS. This case for

this argument also is weakened by trends in the data that were consistent with the hypotheses.

Perhaps the best explanation for these effects is that, even though the essay addressed relevant values, it simply had little impact. People with high fear of nonsexual transmission may have very stable levels of this fear, and, as a result, very fixed attitudes towards public policies and homosexuality. For instance, high levels of fear in these individuals may keep them constantly sensitized to those issues, so the essay had little additional impact. The effect you would expect in this case is simply a main effect of fear of nonsexual transmission. This is exactly what was observed on ratings on how favorable it would be to quarantine AIDS patients, to quarantine people who are HIV positive, and to have mandatory HIV testing for everyone in medical professions. This explanation is compatible with the trends that were observed. The essay seemed to be arousing this fear somewhat, but not enough to strongly influence people's attitudes. It also is consistent with the view that fear of nonsexual transmission is part of an ideology. A well-formed, integral part of a person's belief structure should be fairly stable, resulting in less impact of an external message. If this explanation is correct, it has important implications for various AIDS programs designed to change reactions to PWAs. These implications are discussed below.

The fear of nonsexual transmission also was involved in unexpected, significant interactions on the likelihood of

asking about a partner's sexual history and the preference for being monogamous. These relationship issues were expected to be associated only with self/partner fear. For both effects, there was a relatively more negative relationship between fear of nonsexual transmission and ratings of these attitudes in the instrumental essay condition than the symbolic essay condition. This relationship was completely reversed for self/partner fear. That is, the strongest positive relationship between self/partner fear and these attitudes obtained in the instrumental condition.

One possible explanation is that these results are evidence that fear of nonsexual transmission serves an instrumental function. Certain negative consequences may be associated with asking about your partner's sexual history and being in a monogamous relationship. People may feel that talking about sex is embarrassing or that it creates a bad impression of them. Being monogamous may be too constraining. To be consistent with the data, high fear of nonsexual transmission would have to make people even more wary of such negative consequences when they are cued.

An alternative interpretation, and the one favored here, is that both monogamy and knowledge about your partner can be viewed as value-laden issues. Both of these topics imply concern with promiscuity and careful consideration of a sexual partner. These values are directly relevant to the AIDS phenomena. As would be expected, the relationship between fear of nonsexual transmission and attitudes towards

these issues becomes relatively more positive after reading a value-laden message than an instrumental message. In other words, when the underlying values associated with AIDS are cued, higher fear of nonsexual transmission is more likely to be associated with positive attitudes towards monogamy and asking about a partner's sexual history than if instrumental concerns are cued.

Stability of Effects

Subjects' attitudes towards relationship, homosexuality, and public policy issues that were assessed after the experimental session appeared to be relatively stable. Few significant shifts were noted when subjects' attitudes were re-assessed one week later. For issues where no experimental effects were found, the lack of change over time could mean that the independent variables had no impact and the original attitudes were simply maintained. Alternatively, the different experimental conditions may have shifted attitudes by the same amount and the shift was maintained.

The more important case involves issues for which the predicted experimental effects were found. Here, stability represents persistence of attitude change in subjects with high levels of either self/partner fear or fear of nonsexual transmission. In other words, reading of the relevant essay caused lasting attitude shifts in these subjects.

Most of the predicted effects of self/partner fear obtained regarding relationship issues, and these effects remained stable. This is a positive message for preventive

programs. Even brief exposure to messages concerning the dangers of AIDS is sufficient to produce an enduring shift in some subjects (those high in self/partner fear) towards more positive attitudes about performing certain preventive behaviors.

Although the effects for nonsexual transmission were not as strong, when attitude change did occur it was persistent. This, too, is good news for programs designed to improve public reaction towards PWAs. As suggested above, though, the biggest challenge for these programs appears to be producing attitude shifts.

One potential problem with the stability findings should be noted. This concerns attributing the stability of the changes solely to the experimental manipulations. Recent research suggests that the mere act of reporting an attitude is sufficient to lead to attitude formation (Fazio, Lenn, & Effrein, 1984; Feldman & Lynch, 1988) and increases in attitude accessibility (Fazio, 1986). It is possible, then, that subjects' reports of their attitudes immediately after the experiment further stabilized the newly-formed attitudes. Importantly, however, it is less likely that this effect caused subjects' attitudes to shift.

CONCLUSIONS

Overview of Findings

The initial phase of the project demonstrated that self/partner fear and fear of nonsexual transmission, as well as other types of HIV/AIDS fear, are strongly related to attitudes and beliefs regarding AIDS. For instance, there is a direct association between self/partner fear and preventive behaviors, such as being in a relationship, number of sexual partners, and condom use. Fear of nonsexual transmission is directly related to beliefs about banning students with AIDS from classrooms and attitudes towards homosexuals.

The second phase demonstrated that both types of fear can be involved in more complex effects. For instance, reading information that addresses instrumental concerns seems to enhance the effects of self/partner fear on people's attitudes toward certain preventive behaviors. That is, individuals with high self/partner fear become even more positive about these behaviors. Similar, albeit weaker, trends were found for fear of nonsexual transmission. Reading about certain values associated with AIDS leads people with high amounts of this fear to become more conservative in their public policy attitudes, and to have less favorable attitudes towards homosexuals. Fear of nonsexual transmission also demonstrated positive

associations with factors linked to a highly conservative perspective, suggesting it is part of a larger ideology.

Utility of a Multidimensional Approach

Most studies have examined HIV/AIDS fear as a general, unidimensional construct. Recently, though, researchers have recognized the potential benefits of a multidimensional view of AIDS fear. As mentioned above, both Hill (1988) and Turner, et al. (1988) found differential results for general versus personal AIDS fear. Basing fear distinctions on sources of transmission, Winslow, Rumbaut, and Hwang (1989) found that fear of transmission from dry sources (e.g., through the air or shaking hands) correlated with sexual activity while fear of transmission from wet sources (e.g., sharing silverware or being sneezed on) correlated with pro-quarantine sentiment. Unfortunately, these relationships were not very strong and the two constructs were highly correlated (r=.59).

One of the main goals of this project was to more thoroughly examine the multidimensional perspective of HIV/AIDS fear. Five distinct components of global AIDS fear were identified. One means for assessing the advantage of such a multidimensional view is to examine the improvement in prediction it offers. For the dimensions revealed in this project, the improvement is substantial. The five specific HIV/AIDS fears are related to very different AIDS-relevant issues, and usually only one HIV/AIDS fear dimension is related to any given AIDS issue. Further, these components are better predictors of specific, AIDS-

relevant attitudes and behavioral intentions than global AIDS fear.

The benefits of the multidimensional approach also are apparent when comparing the findings of this project to research using general AIDS fear. For instance, Witt (1988) used a fairly general measure of AIDS attitudes in assessing relationships with authoritarianism. He found a fairly strong correlation between "affect towards persons with AIDS" and authoritarianism (r=.31). Nevertheless, examining more specific dimensions of AIDS attitudes revealed that authoritarianism is very strongly related to fear of nonsexual transmission (r=.48), but only weakly related to self/partner fear (r=.20). Combining multiple constructs in his scale (which was not factor analyzed) may have reduced the correlation observed by Witt. It should be noted, though, that differences in samples and authoritarianism scales between the studies also may account for differences in the correlations.

As another example, Bouton, et al. (1989) found that conservatives tend to be more fearful of AIDS than liberals. Although they claim to be assessing general fear of AIDS, many of the items in their scale are consistent with the items tapping fear of nonsexual transmission. Their scale may be a better measure of this type of fear than of all-encompassing AIDS fear. Not surprisingly, the findings in this project indicate that fear of nonsexual transmission was strongly correlated with conservatism while the other four dimensions of HIV/AIDS fear were not.

This project also has two strengths relative to past work on the multidimensional nature of AIDS fear. The first is its emphasis on statistical analysis of the five HIV/AIDS fear scales. Scales were factor analyzed, internal consistency and test-retest reliability were determined, and numerous other statistical techniques were employed to ensure that the scales possessed desirable psychometric properties. Such extensive statistical assessment has not been used in many past efforts. This project also goes beyond past research on the multiple dimensions of AIDS by examining theoretical origins of different dimensions. Understanding the roots of the dimensions not only provides insight into their unique effects, but also offers suggestions for changing fear levels and fear effects.

HIV/AIDS Fear and Attitude Theory

The multidimensional approach also has implications for the functional theory of attitudes. Most of the research in this area has assumed that an attitude serves a single function. For instance, Pryor and his colleagues (Pryor, et al., 1989; Pryor, et al., 1991) have chosen to examine attitudes towards AIDS as general constructs that are either instrumentally-based or symbolically-based. However, in his formulation of functional theory, Katz (1960) pointed out that an attitude could serve more than one function. Examining the various dimensions, or "sub-attitudes", of a construct facilitates the study of multiple functions. In the case of AIDS, segmenting general HIV/AIDS fear into more specific dimensions allows a separation of instrumental and

symbolic components. This is advantageous since it permits the examination of the separate consequences of these two types of functions. It would even be possible to examine these unique consequences as they concomitantly affect a single individual. Such an investigation is not feasible when AIDS attitudes are thought to serve only one function.

Another theoretical implication of the current project is that it supports some of the major suppositions of functional theory. The initial findings suggest that fear attitudes serving different functions are associated with very different types of behavior. For self/partner fear, these behaviors serve to protect the individual from the consequences of contracting AIDS. Fear of nonsexual transmission, though, appears to be related to more value-laden behaviors. The findings of phase two also support a key tenet of functional attitude theory. Arousal of these attitudes depends on whether information cues cognitions that are relevant to the function they serve.

Although functional theory appeared moribund two decades ago, its recent resurgence is a testimony to its utility in research and its intuitive appeal. Such an approach may be particularly useful for a topic as familiar and multifaceted as AIDS. Because AIDS is familiar, people are more likely to have well-formed attitudes about it. The many different aspects of the AIDS phenomena (e.g., its links with stigmatized groups, its fatal consequences, its modes of transmission, etc.) increases the likelihood that AIDS attitudes will serve a variety of functions.

A final implication for attitude theory in general involves the use of the concept of ideology in research. Ideologies provide people with a broad, stable cognitive structure for perceiving and interpreting incoming information. Undoubtedly, there are advantages of focusing on more "narrow" constructs, such as specific attitudes. Ideologies, though, may be beneficial for looking at consistency of effects across domains within individuals, and the consistency of a single effect across groups of people within a culture. The work of Echabe and Rovira (1989) already has demonstrated the utility of this concept for research on AIDS issues. As mentioned earlier, they found that people's recall of AIDS-relevant information was distorted to fit their pre-existing social representations. Montero (1990) has used the concept of authoritarian ideology to explain how people justify national stereotypes and the use of torture. The findings of this research suggest that this same concept may be theoretically useful in explaining how people justify negative reactions towards PWAs.

Practical Implications

Currently, there seem to be two main themes in psychological research on AIDS. One involves the measurement and promotion of preventive behaviors. The other deals with people's reactions towards PWAs and people who are HIV positive. The results of this study have implications for both of these lines of research.

Of primary importance for the promotion of preventive measures are the results concerning self/partner. The results of this project suggest that programs should be designed to directly increase levels of self/partner fear as this should be effective in increasing the performance of many preventive behaviors. It also is advantageous for the programs to address some of the negative consequences that are at stake, since this will generate more positive, enduring attitudes towards preventive behaviors. Ironically, it is the people who are already at high levels of self/partner fear that will be most affected by such messages.

A critical mistake that can be made by these programs is to ignore the impact of fear of nonsexual transmission when designing their messages. Since certain values are involved whenever AIDS is brought up, program planners must be sensitive to this. Unintentionally incorporating specific values into a message designed to increase preventive behavior may actually have the opposite effect for people high in fear of nonsexual transmission.

A different dilemma exists for programs designed to improve reactions towards PWAs. The question is not which fear dimension affects reactions, since only fear of nonsexual contact had any impact on attitudes towards public policies and homosexuality. Rather, the issue is whether these attitudes <u>can</u> be changed.

That fear of nonsexual transmission may be part of an ideology poses special problems for AIDS programs. Sears

and Kinder (1985; Kinder, 1986; Kinder & Sears, 1981) argue that such attitudes are very deeply-rooted and are not necessarily based on actual experience. Fear of nonsexual transmission also is closely tied with negative attitudes towards a number of groups and substantially influencing any one of these may require a shift in the entire ideology. Programs designed to improve reactions toward PWAs, then, will have a particularly difficult time influencing the opinions and behaviors of individuals with elevated levels of this fear. It is fortunate that this type of fear does not appear to be at high levels in the population. Still, negative reactions from even an out-spoken minority directed at PWAs and HIV positive individuals is sufficient to increase their suffering. For now, the best approach for program planners appears to be to steer away from messages that address values such as promiscuity and deviance. Messages targeting values such as individual rights and compassion, however, may produce the desired effect.

The fear dimensions examined in this project undoubtedly have a great deal of applicability in AIDS research. To obtain the maximum benefits from this work, three lines of future research are important. One direction should be the identification of demographic variables that differentiate segments of the population on their HIV/AIDS fear scores, particularly self/partner fear and fear of nonsexual transmission. This should provide program planners with vital information about how to focus their messages in certain regions of the country.

Another important line of research involves an examination of message impact. This study demonstrated that reading even a short passage can lead to lasting changes in people with high self/partner fear, as long as the passage focuses on the right issues. It also demonstrated that people's attitudes towards public policies and homosexuality are more difficult to shift. Stronger messages, repeated exposures, and different modes of presentation may lead to very different patterns. Additional work needs to address this possibility.

Perhaps the biggest concern for psychological research is simply the growing number of AIDS cases. This increase is likely to have numerous effects on the use of preventive measures and people's reaction towards PWAs. As people witness more and more cases of AIDS, self/partner fear may increase, leading to increases in preventive behavior. More cases of AIDS also make it more likely that people will have more contact with PWAs. This may lead to improvements in reactions towards PWAs and lower fear of nonsexual transmission. This is consistent with the results of O'Donnell, O'Donnell, Pleck, Snarey, and Rose (1987) who found that more contact was negatively related to "AIDS phobia," as long as the contact was not impersonal. Whether these positive effects occur remains to be seen. Carefully assessing self/partner fear and fear of nonsexual transmission will help explain these potential shifts.

Limitations of the Project

There are some possible limitations of the current project that need to be addressed. First, attitudes, behavioral intentions, and self-reported behaviors were examined in this project, rather than actual behavior. The key problem is that many of the behaviors of interest in this project are extremely difficult to assess without violating the privacy of the subject. Although controversy exists about the relationship between actual behavior and these constructs (e.g., Wicker, 1969), each has been shown to be a good predictor of behavior in a number of domains (Fishbein & Ajzen, 1975).

It also is important to stress that most of these effects have been demonstrated only on college-age subjects. Until other populations have been examined, generalizations must be made with caution. Nevertheless, the spread of HIV within the college population is a crucial issue, since high amounts of sexual activity and multiple partners make this group particularly susceptible. This will become an even greater concern in the next few years as the incidence of AIDS increases among heterosexuals. Understanding college students' attitudes is an indispensable part of slowing the spread of HIV within this group.

There is the possibility that these effects apply only to the relationship and public policy issues examined in this project. These concerns are alleviated somewhat by the fact that differences between instrumentally-based and symbolically-based attitudes have been found in studies

focusing on AIDS issues (e.g., Pryor, et al., 1989) and other topics (e.g., Snyder & DeBono, 1985). Still, it is important for future research to replicate the effects of the different fear dimensions in other AIDS-relevant domains.

APPENDIX A
ITEMS RELEVANT TO THE DIFFERENT ASPECTS OF HIV/AIDS FEAR

A. Self/Partner Fear

1. I am afraid that my behaviors can lead to my catching AIDS.
2. I consider myself to be at risk of getting AIDS.
3. I am very concerned about my chances of getting AIDS.
4. I believe certain things I do make me susceptible to AIDS.
5. I am worried that my partner(s) may catch AIDS from others.
6. I am terrified by the thought of my partner(s) being infected with AIDS in the future.
7. I can easily imagine how my partner(s) could get AIDS.

B. Emotionality

1. I am terrified by the thought of being infected with AIDS in the future.
2. I am extremely worried that my daughter (or future daughter) could catch AIDS from someone.
3. I am terrified that my son (or future son) might catch AIDS.
4. I am terrified by the thought of one of my friends being infected with AIDS in the future.
5. I am terrified by the thought of AIDS damaging our society in the future.
6. I am terrified that a lot of people age 18-27 are going to die from AIDS.
7. It is scary that babies can be born with AIDS.

C. Fear for Important Others

1. I am afraid that the behaviors of one of my family members can lead to their catching AIDS.
2. I am afraid that the behaviors of one of my best friends can lead to their catching AIDS.
3. It is quite possible that a good friend of mine could catch AIDS.
4. It is quite possible that someone I care about will catch AIDS.
5. I am concerned that important people in my life may be at high risk of getting AIDS.

D. Denial

1. I do not mind imagining how AIDS can affect me personally.
2. I do not like to consider how AIDS can affect my partner(s).
3. I do not like to think about AIDS affecting my family members.
4. I do not like to consider how AIDS can affect my friends.
5. I do not like thinking about how AIDS can affect society.

E. Fear of Nonsexual Transmission

1. I am worried that my job requires touching people with AIDS.
2. The idea of hugging someone with AIDS scares me.
3. Working with someone who has AIDS is frightening to me.
4. I am afraid to talk to a person with AIDS.
5. I am scared that performing my job might lead to contact with someone who has AIDS.

APPENDIX B
ITEMS ASSESSING AUTHORITARIANISM AND CONSERVATISM

A. Authoritarianism Items

1. Laws have to be strictly enforced if we are going to preserve our way of life.
2. People should pay less attention to the Bible and the other old traditional forms of religious guidance, and instead develop their own personal standards to what is moral and immoral.
3. Women should always remember the promise they make in the marriage ceremony to obey their husbands.
4. Our customs and national heritage are the things that have made us great, and certain people should be made to show greater respect for them.
5. Capital punishment should be completely abolished.
6. National anthems, flags, and glorification of one's country should all be de-emphasized to promote brotherhood of all men.
7. The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.
8. A lot of our society's rules regarding modesty and sexual behavior are just customs which are not necessarily any better or holier than those which other cultures follow.
9. Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment.
10. Obedience and respect for authority are the most important virtues children should learn.
11. Organizations like the army and the priesthood have a pretty unhealthy effect upon men because they require strict obedience of commands from supervisors.
12. One good way to teach certain people right from wrong is to give them a good stiff punishment when they get out of line.
13. Youngsters should be taught to refuse to fight in a war unless they themselves agree the war is just and necessary.
14. It may be considered old-fashioned by some, but having a decent, respectable appearance is still the mark of a gentleman and, especially, a lady.
15. In these troubled times, laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who stir things up.

16. Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.
17. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
18. Rules about being "well-mannered" and respectable are chains from the past which we should question very thoroughly before accepting.
19. The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these.
20. If a child starts becoming a little too unconventional, his parents should see to it he returns to the normal ways expected by society.
21. Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it's best to use a firm, tough hand when dealing with them.
22. A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
23. Homosexuals are just as good and virtuous as anybody else, and there is nothing wrong with being one.
24. It's one thing to question and doubt someone during an election campaign, but once a man becomes the leader of our country we owe him our greatest support and loyalty.

B. Conservatism Items

1. Politically speaking, I am:
Very Liberal 1 2 3 4 5 6 7 8 9 Very Conservative

2. Politically, I consider myself a:
Republican 1 2 3 4 5 6 7 8 9 Democrat

APPENDIX C
INSTRUMENTAL, SYMBOLIC, AND NEUTRAL MESSAGES

A. Instrumental Message

By now, everyone has heard about AIDS. Apparently, though, there are too many people who just don't realize how severe the problem is. This article discusses what is probably the most disturbing aspect of AIDS, how AIDS has completely changed the costs and benefits we receive from our interpersonal relationships.

Starting and maintaining good relationships with other people seems to be more difficult today than ever before. Probably nothing has had a greater impact on this than the current AIDS phenomena. The spread of AIDS is directly related to the relationship issue since it has changed how we interact with others. By doing this, the AIDS epidemic has prevented us from obtaining many of the positive things that relationships offer, and it has created a situation where even our most valued relationships can have horrible consequences.

The AIDS issue has important ramifications for most aspects of our life. One area that is affected involves the relationships we develop at school or our jobs. For instance, knowing that an HIV-positive person is present could detract from the enjoyment we get from activities in that setting. Further, some situations at school or our jobs might require behaviors that could lead to our contracting AIDS.

Even closer to home, AIDS can have powerful effects on our relationships with friends and family. If someone we are very close to tests positive for HIV, it can put a tremendous amount of strain on our relationship with that person. They may no longer be able to enjoy the things we used to do with them. The person also may require a lot of emotional support. Finally, we may have our own worries that we could somehow be exposed to the virus.

For most of us, though, the really negative consequences of the AIDS epidemic are associated with our more intimate relationships. For instance, one effect of AIDS is that the possibility of being infected with HIV makes our sexual activity much less enjoyable. Being physically intimate with another person is one of the most pleasurable things that we can experience. But for many of us, especially those of us not in a monogamous relationship,

at least some of the pleasure is always reduced by the fear of contracting AIDS. A second negative result is that AIDS can make it more it difficult to develop close relationships with our partners. AIDS can make us feel uncomfortable talking about certain personal issues like contraception, and we may always be worrying that the people we're involved with are doing something to put us at risk. Strong relationships develop through trust, good communication, and being able to feel at ease around the other person. How can we achieve these things when we are having doubts about our partners? Perhaps the most terrifying thing here is that, while AIDS makes it harder to communicate, if we do not talk with our partners we are <u>really</u> setting ourselves up. Of course, the most obvious and tragic consequence of AIDS is that we could be exposed to the virus and contract the disease. What is amazing is that, despite this, many of us continue to act as if we are too ignorant to understand the problem. It's actually quite simple. If you have sex with someone who is HIV positive then there is a very good chance that you will be exposed to HIV. When you have a sexual relationship with more than one person, the odds that you will contract AIDS increase dramatically. How can you tell for sure if your partner has the virus? That's what people just can't seem to comprehend. There is almost no way to be absolutely certain about your partner. If you are exposed to the virus, though, it is almost certain that your immune system will weaken, your body's systems will fail, and you will slowly die.

AIDS is a mysterious disease and we aren't even close to really understanding it. All we know for sure is that HIV is a powerful and dangerous virus. The sad result is that something we care about so much, our interpersonal relationships, have become associated with so many terrible consequences. So what can we do? Any true solution has to get to the root of the problem. We all know there are a number of things we can do to protect ourselves that are quite effective. The problem is that, even when we are doing certain things that could be risky, we still are likely to downplay how susceptible we are. Consequently, taking precautions just doesn't seem that necessary. Simply put, people need to wise up. If we are ever going to conquer AIDS we all must come to the realization that, when given an opportunity, AIDS is not that selective in who it attacks. If we keep that in mind, we may yet be able to enjoy all of the great things about our relationships that AIDS threatens to take away.

B. Symbolic Message

By now, everyone has heard about AIDS. Apparently, though, there are too many people who just don't realize how severe the problem is. This article discusses what is probably the most disturbing aspect of AIDS, how the state

of morality in this country has given strength to the disease.

It is obvious that peoples' level of morality is deteriorating at an alarming rate. Just take a look at the newspaper or watch the television. All you see are stories about pornography, sexual abuse, and violent crimes. Perhaps nowhere is this problem more apparent than in regards to the current AIDS phenomena. AIDS is directly related to the morality issue because it is so closely associated with a number of questionable behaviors. In many ways, AIDS has become a symbol of how unethical behavior can take a toll on society.

A large part of the problem centers around sexual issues. Back in the 1960's our culture went through a stage where everything considered old-fashioned was declared "uncool" and was consequently rejected. This included many of our traditions and standards concerning sexual behavior. In their place we got the sexual revolution and "free love." The benefits of restraint and self-control were traded for pleasure-seeking and self-indulgence. Unfortunately, these ideas continue to flourish today and the result is that too many men and women are completely irresponsible about their sexual behavior. It's as if no one sees the importance of being loyal to one person or waiting until you're married to have sex. Such attitudes caused enough problems regarding unwanted pregnancies and other sexually transmitted diseases, but society's promiscuity problem really became crucial when AIDS came along. Not surprisingly, research has demonstrated that people who are promiscuous also have an extraordinarily higher likelihood of contracting AIDS.

The morality issue also is apparent when examining the main targets of AIDS. Currently, about 90% of the reported cases of AIDS are homosexuals or IV drug-users. In hindsight, it really should come as no surprise that AIDS has attacked these two deviant groups in our society. In their efforts to track the spread of the disease, researchers have documented that many gay men have incredibly high levels of sexual activity with numerous partners. Likewise, there are several reports on how intravenous drug-users frequently pass their needles around to dozens of other addicts who need a "fix". People can become infected with HIV in many ways, but the offensive and often illegal behaviors that are common to these groups (e.g., anal intercourse and needle sharing) provide the ideal setting for HIV transmission. Certainly it is a horrible thing when anyone contracts AIDS, but when certain groups of people consistently perform high-risk behaviors that expose them to HIV, you can't help feeling like they brought it on themselves. Maybe it's true that AIDS was somehow meant as a form of punishment for morally corrupt behavior. Unfortunately, though, AIDS has not stopped there, and perhaps that is the most unfair thing about the

disease. Although it started out as something contained within a few small sub-sections of the population, the behavior of these groups resulted in AIDS attacking many undeserving victims such as children and people needing blood transfusions.

AIDS is a mysterious disease and we aren't even close to really understanding it. If you thought we could count on the so-called experts, forget it. Time and time again, certain cases have forced them to admit that they are baffled. All we know for sure is that HIV is a powerful and dangerous virus. So what can we do? Everyone has there own suggestion, but most of the things people are told to do have not slowed the disease one bit. Any true solution has to get to the root of the problem. Somehow the important values that have been forgotten by so many people need to be brought back. The main way this can happen is through education. Teaching our young children proper moral conduct should go hand in hand with lessons in reading and arithmetic. It also is time for people in every community to step forward and acknowledge the virtues of living a good, clean life. Hopefully these people will serve as role models for the rest of the community and others will join in. Clearly, if we are ever going to conquer AIDS, people must guide their lives by a higher set of standards than they are currently using. One thing is for sure, it is going to take a lot of hard work to eliminate the underlying problems that AIDS represents.

C. Neutral Message

By now, everyone has heard about AIDS. Apparently, though, there are too many people who just don't realize how severe the problem is. This article discusses one of the most important aspects of AIDS, funding of AIDS research.

To address the policy issues posed by HIV and AIDS, it is necessary to examine the policy process itself. A distinguishing feature of the political system of the United States is its structure as a three-level federal system with strong constitutional provision for separation of powers among federal, state, and local governments and among executive, legislative, and judicial branches at each level. The result of this arrangement for the public policy process is fragmentation and a wide dispersion of power and ambiguity with respect to authority and responsibility for various functions and programs.

The role of the government in the United States, particularly in relation to domestic social programs, has often been to stimulate or support the private sector. This is nowhere more evident than in the area of health, where the bulk of government resources have been used to support activities in the private sector. These activities include biomedical research by individuals in private universities,

profit making companies, and nonprofit institutions; construction and modernization of nonprofit hospitals; training of physicians, dentists, nurses, pharmacists, and other health professionals who provide service mainly in the private sector; and financing of health care provided by private physicians and hospitals (profit and nonprofit) to Medicare (federal) and Medicaid (state) beneficiaries. Much of the attention paid to the private sector is a function of the power of relevant special interest groups in various political circles. Because many groups that were initially associated with the AIDS phenomena were at a political disadvantage, the response of the private sector regarding AIDS research was quite slow. Consequently, a great deal of pressure rests on the government to correct this problem.

As mentioned before, the funding of research programs and policies can occur at the federal, state, and local level. Financially, the federal government is in the best position to have a substantial impact on AIDS research. Ironically, the AIDS phenomena began at a time when the federal government was attempting to reduce its role in many domestic social programs. Nevertheless, the federal government was forced to increase spending during the first few years after AIDS was identified. For example, in 1982 the federal government allocated roughly $5,500,000 on AIDS programs, but by 1987 this number had climbed to 410,600,000. Still, many view the increases as inadequate and out of proportion to the growing need. This, in turn, has put a great deal of pressure on state and local governments. Unfortunately, these governments simply are not capable of financing much of the needed research. For this reason, funding from these sources often goes to research programs that examine the immediate crises found in a specific geographic area. Too often, the answers supplied by this research serve only as temporary patches, never getting to the actual root of the problem.

So what is the outlook for the future? The plan developed by the U.S. Public Health Service has targeted a number of priorities in AIDS research. Most of the proposed programs are directed at biomedical, epidemiological, and psychosocial factors. Another area in which government funding has been lacking involves the dispersal of information. During recent years less than 4% of the federal governments resources were appropriated for information dissemination. The Public Health Service finally appears to have recognized that all the research in the world is useless if the information is not passed on.

In conclusion, it is obvious that there is a long way to go. Perhaps the clearest message so far is that more congruence is needed between the three levels of government. It is crucial that federal, state, and local governments begin to work cooperatively to develop integrated policies and programs if AIDS is going to be dealt with effectively.

APPENDIX D

ITEMS ASSESSING ESSAY PERCEPTIONS, RELATIONSHIP ISSUES, PUBLIC POLICY ISSUES, AND ATTITUDES TOWARDS HOMOSEXUALS

A. Essay Perception Items

1. How much do you agree with the preceding essay?
2. How interesting do you think the essay was?
3. How persuasive do you think the essay was?

B. Relationship Items

1. How important is it for you to be in a relationship that is monogamous (exclusive)?
2. How likely are you to ask about a potential partner's sexual history?
3. If you did begin a monogamous relationship, what is the likelihood that you and your partner would get tested for HIV?
4. How likely are you to abstain from (avoid) any type of sexual contact in the next six months?

C. Public Policy Items

1. How much do you favor mandatory HIV/AIDS testing for people considered to be in high risk groups?
2. How much do you favor mandatory HIV/AIDS testing for people in the medical profession?
3. How much do you favor quarantining of people who have tested positive for HIV?
4. How much do you favor quarantining of AIDS patients?
5. How much do you favor the use of television ads to promote condom use?

D. HATH Items

1. I enjoy the company of homosexuals.
2. It would be beneficial to society to recognize homosexuality as normal.
3. Homosexuals should not be allowed to work with children.
4. Homosexuality is immoral.
5. Homosexuality is a mental disorder.
6. All homosexual bars should be closed down.
7. Homosexuals are mistreated in our society.
8. Homosexuals should be given social equality.
9. Homosexuals are a viable part of our society.
10. Homosexuals should have equal opportunity employment.

11. There is no longer a reason to restrict the places homosexuals work.
12. Homosexuals should be free to date whomever they want.
13. Homosexuality is a sin.
14. Homosexuals do need psychological treatment.
15. Homosexuality endanger the institution of the family.
16. Homosexuals should be accepted completely into our society.
17. Homosexuals should be barred from the teaching profession.
18. Those in favor of homosexuality tend to be homosexuals themselves.
19. There should be no restrictions on homosexuality.
20. I avoid homosexuals whenever possible.

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BIOGRAPHICAL SKETCH

Jeff Glor received a Bachelor of Science degree in psychology and a Bachelor of Arts degree in economics from Syracuse University. He is currently completing the requirements for his Doctor of Philosophy degree. His next stop is Philadelphia.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Lawrence J. Severy, Chair
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

John G. Lynch
Professor of Marketing

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Monica Biernat
Assistant Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Christian Crandall
Visiting Assistant Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December, 1991

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